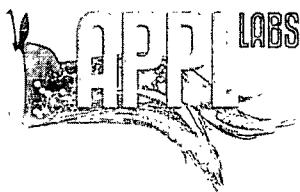


N00174.AR.002009
NSWC INDIAN HEAD
5090.3a

VALIDATED DATA PACKAGE, 77838, NSWC INDIAN HEAD MD
12/7/2015
APPL LABS



908 North Temperance Ave. ▼ Clovis, CA 93611 ▼ Phone 559-275-2175 ▼ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 74807

Summary Report

December 7, 2015

Tetra Tech NUS, Inc.
5700 Lake Wright Drive, Suite 309
Norfolk, Virginia 23502

Attn: Ed Corack

Title: Report of Data: Case 77838

Project: CTO JU11 112G02622 NSF Indian Head, MD

Contract #: Prime contract # for DoD: Navy CLEAN. N62467-08-D-1001
Subcontract # 1045497, Work Release # 08-JU11

Dear Mr. Corack:

Six soil samples were received November 11, 2015, at 3.5°C. Written results for the requested analyses are being provided on this December 7, 2015.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Cynthia Clark, cclark@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Sharon Dehmlow, Laboratory Director
APPL, Inc.

SD/rp
Enclosure
cc: File

Number of pages in this report: 68

Sample receipt information

ARF: 77838

Project: CTO JU11 112G02622 NSF Indian Head, MD

Sample Receipt Information:

The soil samples were received on November 11, 2015, at 3.5°C. The samples were assigned Analytical Request Form (ARF) number 77838. The sample numbers and requested analyses were compared to the chains of custody and email communications. No exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
S67-SS50-0006	AZ24396	SOIL	11/09/15	11/11/15
S67-SS50-0006P	AZ24397	SOIL	11/09/15	11/11/15
S67-SB50-1618	AZ24398	SOIL	11/09/15	11/11/15
S67-SS51-0006	AZ24399	SOIL	11/09/15	11/11/15
S67-SS52-0006	AZ24400	SOIL	11/10/15	11/11/15
S67-SS53-0006	AZ24401	SOIL	11/10/15	11/11/15

Percent moisture was determined using ISM02.2, Exhibit D, section 10.0.

The samples and blanks were screened for J-value responses between the detection limit (DL) and limit of quantitation (LOQ).

Laboratory control limits generated in house do not meet the control limits listed in DoD QSM 4.2 for all analytes. Laboratory control limits generated for this project meet all control limits listed in the DoD QSM 4.2 except where noted. A copy of our in house generated control limits is available upon request. In addition, a copy of our LOQ control limits, established using 7 data points, are also available upon request.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

EPA Method 8270D

Semi-Volatile Organic Compounds

Sample Preparation and Analysis Information:

The soil samples were extracted according to EPA method 3550B. All holding times were met.

The samples were analyzed according to EPA Method 8270D using an Agilent GC/MS.

Quality Control/Accuracy

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS acceptance criteria were met.

Sample S67-SS53-0006 was designated by the client for MS/MSD analysis. All acceptance criteria were met.

Method blanks

No target metal was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Surrogates

Surrogate recoveries are summarized on Form 2 & 8. The surrogate 2-Fluorobiphenyl recovered below the 45% lower control limit in two samples: S67-SS50-0006 and S67-SS52-0006. The samples were re-injected with similar results. All other surrogate recoveries were acceptable.

Calibration

The initial and continuing calibrations were performed according to the method. All method acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All method criteria were met.

Summary:

No other problem was encountered. All data generated are acceptable.

EPA Method 8270D-SIM

Polynuclear Aromatic Hydrocarbons

Sample Preparation and Analysis Information:

The soil samples were extracted according to EPA method 3550B. All holding times were met.

The samples were analyzed according to EPA Method 8270D using an Agilent GC/MS with selective ion monitoring. The extract for sample S67-SS51-0006 was dark and viscous. The extract was diluted by a factor of 10 and the reporting limits were raised accordingly.

Manual integrations were performed in accordance with APPL's SOP. Benzo (b) fluoranthene and benzo (k) fluoranthene were manually integrated in two samples. Chromatograms of before and after manual integration are enclosed.

Quality Control/Accuracy

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS acceptance criteria were met.

Sample S67-SS53-0006 was designated by the client for MS/MSD analysis. The RPDs for three analytes exceeded the 30% limit. All spike recoveries met acceptance criteria.

Method blanks

No target analyte was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Surrogates

Surrogate recoveries are summarized on Form 2 & 8. Due to the dilution required by the matrix, the surrogates for sample S67-SS51-0006 are reported as "DO", diluted out. Nitrobenzene-D5 recovered above the 100% upper control limit at 101% in the MSD. All other surrogate recoveries were within control limits.

Calibration

The initial and continuing calibrations were performed according to the method. All method acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All method criteria were met.

Summary:

No other analytical problem was encountered. The data generated are acceptable.

EPA Method 6850

Perchlorate by LC-Mass Spec

Sample Preparation and Analysis Information:

The soil samples were prepared according to the method. The samples were analyzed according to EPA Method 6850 using an Agilent 6460 Triple Quad LC/MS. The samples were prepared and analyzed within acceptable hold time.

Manual integrations were performed in accordance to APPL's SOP. Perchlorate was manually integrated in two samples, MS/MSD and ICS. Chromatograms of before and after manual integration are enclosed.

Quality Control/Accurance

Calibrations:

Calibrations were performed according to the method. All calibration acceptance criteria were met. The second source met acceptance criteria.

Blanks:

Perchlorate was not detected at or above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

Laboratory Control Spike (LCS) and Interference Check Sample (I.C.S.) were used for quality assurance. All LCS acceptance criteria were met..

The Interference Check Sample (I.C.S.) was prepared using a mixed anions solution. The ICS recovery met acceptance criteria.

Sample S67-SS53-0006 was designated by the client for MS/MSD analysis. Perchlorate recovered below the 80% lower control limit in the MS and MSD.

Internal Standards:

The area counts of the sample Internal Standards were compared to the average IS area counts of the initial calibration. All internal standards were within the 50%D acceptance criteria.

Summary:

No other analytical exception is noted. All data were acceptable.

EPA Method 8330B

Energetics

Sample Preparation:

The samples were dried and extracted according to EPA method 8330B, without using incremental sampling procedures. All holding times were met.

Analysis:

The samples were analyzed according to EPA Method 8330B using an Agilent 1290 HPLC with DA detector. Manual integrations were performed in accordance with APPL's SOP. The following analytes were manually integrated in the calibration standards: HMX, Nitroglycerin, PETN, and 3-Nitrotoluene. PETN was manually integrated in the LCS. Chromatograms of before and after manual integration are enclosed.

Quality Control/Assurance:

Spike Recovery:

A Laboratory Control Spike (LCS) was used for quality assurance. All spike acceptance criteria was met.

Sample S67-SS53-0006 was designated by the client for MS/MSD analysis. All acceptance criteria were met.

Method blanks:

No target analyte was detected at or above one-half the limit of quantitation (LOQ) in the method blank.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogates had acceptable recoveries.

Calibration:

The initial and continuing calibrations and second source were analyzed according to the method. All calibration criteria were met.

Summary:

No other analytical problem was encountered. The data generated are acceptable.

EPA Method 6010C

Metals

Digestion and Analysis Information:

The soil samples were digested according to EPA method 3050B. The samples were analyzed for metals according to EPA method 6010C using a Perkin Elmer Optima 5300DV. All holding times were met.

Quality Control/Accuracy:

Calibrations:

Calibrations were performed according to the methods for the initial calibration and the initial calibration verification. The initial calibration verification is prepared from a second source standard.

Blanks:

No target metal was detected above one half the LOQ in the method blank.

Spikes:

Laboratory Control Spike (LCS), Matrix Spikes (MS/MSD), Post-Digestion Spike (PDS), and a Dilution Test (DT) were used for quality assurance. All LCS acceptance criteria were met.

Sample S67-SS53-0006 was designated by the client for MS/MSD analysis. Three of the four metals recovered outside of the control limits in the MS and/or MSD. All acceptance criteria were met in the PDS and DT.

Summary:

No other analytical problem was encountered. The data generated are acceptable.

APPL - Analysis Request Form

77838

Client: Tetra Tech
 Address: 5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502
 Attn: Ed Corack
 Phone: 757-466-4908 Fax: 757-461-4148
 Job: CTO JU11 112G02622 NSF Indian Head
 PO #: MSA #1045497 Release #08-CTO JU11
 Chain of Custody (Y/N): Y # 42665
 RAD Screen (Y/N): Y pH (Y/N): N
 Turn Around Type: STD

Received by: RBP 
 Date Received: 11/11/15 Time: 10:30
 Delivered by: FEDEX
 Shuttle Custody Seals (Y/N): Y Time Zone: -5
 Chest Temp(s): 3.5°C
 Color: B-RED
 Samples Chilled until Placed in Refrig/Freezer: Y
 Project Manager: Cynthia Clark
 QC Report Type: DVP4/LEDD/MD
 Due Date: 12/02/15

Comments:

login to ed.corack@ amy.thomson@ & tobrena.sedlmyer@tetrtech.com.

Rush results to Ed; 21 calendar day TAT for final report

1HC DVP4 and summary report & 2 BOOKMARKED CDs of DVP4 and

Summary report (sample & QC results w/surrogate & blank summaries) to Amy Thomson (Pittsburgh)

Include original COC with report. NOTHING to Ed in VA office

EDD: TTEC LEDD to <http://lsg.applications.tetrtech.com/LEDDChecker2010/>

EDD: email confirm to ed.corack@ amy.thomson@ & tobrena.sedlmyer@tetrtech.com

Guidance: DOD QSM v4.2: DOD Forms, LOD Database

Sample Distribution:Charges:Invoice To:

GC: 6-\$87DJU11S, 6-\$SIMDDODSM

ACCOUNTS PAYABLE

Extractions: 6- HPLC6850GROSS, 6- MSE018, 6-

661 Andersen Dr, Foster Plaza 7

SON009, 6- SON009S

Pittsburgh, PA 15220-2745

LCMS: 6-\$6850SM, 6-\$83BJU11S

Invoice In triplicate per SOW

Metals: 6-\$61CJU11S2(AI,B,Li,Zn)

Wetlab: 6-MOIST, 6-MOISTG

Other: 6- M3050

Client ID	APPL ID	Sampled	Analyses Requested
1. S67-SS50-0006	AZ24396S	11/09/15 09:35 	\$61CJU11S2(AI,B,Li,Zn), \$6850SM, \$83BJU11S, \$87DJU11S, \$SIMDDODSM, MOIST, MOISTG -- add Li Spike
2. S67-SS50-0006P	AZ24397S	11/09/15 09:36 	\$61CJU11S2(AI,B,Li,Zn), \$6850SM, \$83BJU11S, \$87DJU11S, \$SIMDDODSM, MOIST, MOISTG -- add Li Spike
3. S67-SB50-1618	AZ24398S	11/09/15 09:50 	\$61CJU11S2(AI,B,Li,Zn), \$6850SM, \$83BJU11S, \$87DJU11S, \$SIMDDODSM, MOIST, MOISTG -- add Li Spike

APPL - Analysis Request Form**77838**

4. S67-SS51-0006	AZ24399S 	11/09/15 13:20	\$61CJU11S2(Al,B,Li,Zn), \$6850SM, \$83BJU11S, \$87DJU11S, \$SIMDDODSM, MOIST, MOISTG -- add Li Spike
5. S67-SS52-0006	AZ24400S 	11/10/15 09:40	\$61CJU11S2(Al,B,Li,Zn), \$6850SM, \$83BJU11S, \$87DJU11S, \$SIMDDODSM, MOIST, MOISTG -- add Li Spike
6. S67-SS53-0006	AZ24401S MS/MSD 	11/10/15 12:30	\$61CJU11S2(Al,B,Li,Zn), \$6850SM, \$83BJU11S, \$87DJU11S, \$SIMDDODSM, MOIST, MOISTG -- add Li Spike

APPL Sample Receipt Form

ARF# 77838

Sample	Container Type	Count	pH
AZ24396	21 8oz Jar	2	na
AZ24397	21 8oz Jar	1	na
AZ24398	21 8oz Jar	2	na
AZ24399	21 8oz Jar	2	na
AZ24400	21 8oz Jar	2	na
AZ24401	21 8oz Jar	3	na

Sample	Container Type	Count	pH
--------	----------------	-------	----

77838
3.5

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

CHAIN OF CUSTODY RECORD

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 42665

Report to: PLEASE PRINT

Company Name: Tetra Tech Phone: 757-466-4908
Address: 5700 Lake Wright Dr. Suite 309
Norfolk, VA 23502 Fax: _____
Attn: Ed Carrack

Invoice to: PLEASE PRINT

Company Name: See Phone: _____

Address: _____ Fax: _____

Attn: Contract

Project Name/Number NSF-Indian Head Site 67 112G02622	Sampler (Print) <u>Jacob Birkett</u>						Analysis Requested/Method Number					Date Shipped: <u>11-10-15</u>			
		Matrix					Perchlorate	Select Metals	Select VOCs	Pthalates + PAHs	Select Energy 65				
Sample Identification	Location	Date Collected <u>11-9-15</u>	Time Collected <u>0935</u>	Time Zone <u>ET</u>	No. of Containers <u>2</u>	Aq	Sed.	Soil							Carrier: <u>FedEx</u>
S67-SS50-0006	S50/MW27	11-9-15	0935	ET	2		X		X	X	XX				Waybill No.: <u>8744-3758-5690</u>
S67-SS50-0006P	S50/MW27	11-9-15	0936	ET	2		X		X	X	XX	X			Comments:
S67-SB50-1618	S50/MW27	11-9-15	0950	ET	2		X		X	X	XX	X			
S67-SS50-1613P	S50/MW27	11-9-15	0951	ET	2	<u>JB</u>	<u>JB</u>								
S67- ^{SS51} -0006	S51/MW28	11-9-15	1320	ET	2		X		X	X	XX	X			
S67-SS52-0006	S52/MW29	11-10-15	0940	ET	2		X		X	X	XX	X			
S67-SS53-0006	S53/MW30	11-10-15	1230	ET	3		X		X	X	XX	X			<u>Run MSMS</u>

JB / 11-10-15

Shuttle Temperature:	Turnaround Requested: Check one <input checked="" type="checkbox"/> Standard 2-3 wk <input type="checkbox"/> One week <input type="checkbox"/> 24/48 Hrs. <input type="checkbox"/> Other				Sample Disposal: <input type="checkbox"/> Return to client <input checked="" type="checkbox"/> Disposal by Lab (30-day retention)				
Relinquished by sampler: <u>JB</u>	Date <u>11-10-15</u>	Time <u>1700</u>	Received by: <u>FedEx</u>	Relinquished by:	Date	Time	Received by:		
Relinquished by: <u>Yang</u>	Date	Time	Received by:	Relinquished by:	Date <u>11/11/15</u>	Time <u>10:30</u>	Received at lab by: <u>Yang</u>		

White: Return to client with report

Yellow: Laboratory Copy

Pink: Sampler

See reverse side for Container Preservative and Sampling Information

COOLER RECEIPT FORM

ARF: 77838

- 1) Project: CTO JU11 112G02622 NSF Indian Head Date Received: 11/11/15
- 2) Coolers: Number of Coolers: 1
- 3) YES Were custody seals present and intact? How many? 2 Name/Date on seal? see below
- 4) YES Was there a shipping slip? Carrier name: FEDEX
- 5) Type of packing in cooler: bubble wrap popcorn foam plastic bags
 wet ice dry ice no ice other
- 6) YES Were cooler temperatures acceptable?
- 7) Serial number of certified NIST thermometer use J5297
- 8) Cooler temp(s): In °C
 1: 3.5 2: _____ 3: _____ 4: _____ 5: _____ 6: _____
 7: _____ 8: _____ 9: _____ 10: _____ 11: _____ 12: _____

Chain of custody:

- 9) YES Was a chain of custody received?
 10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

- 11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?
 12) YES Did all container labels agree with custody papers?

Sample Containers:

- 13) YES Were all containers sealed in separate bags?
 14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?
 15) YES Were correct containers and preservatives used for the tests indicated?
 16) YES Was a sufficient amount of sample sent for tests indicated?
 17) NA Were bubbles present in volatile samples?
 If yes, the following were received with air bubbles:
 Larger than a pea: _____
 Smaller than a pea: _____

Preservation Hold time:

- 18) Yes Was a sufficient amount of holding time remaining to analyze the samples?
 19) NA Was the pH taken of all non-VOA preserved samples and written on the sample container?
 20) NA Was the pH of acid preserved non-VOA samples < 2?
 21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?
 22) NO Were unpreserved VOA Vials received?
 23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
 pH strip lot number: _____
 Lab notified if pH was not adequate: _____

Notes/Deficiencies:



Personnel receiving samples: tx Second reviewer: YL

Personnel labeling samples: _____

Project manager notified: _____ Date/Time of notification _____

Name of client notified: _____ Date/Time of notification _____

EPA 8270D SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24396
QCG: #87DJU-151117A-202360

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 15.9 Percent Moisture.)								
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	0.200 U	0.78	0.200	0.074	mg/kg	11/17/15	11/18/15
EPA 8270D	BUTYL BENZYL PHTHALATE	0.200 U	0.39	0.200	0.067	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-BUTYL PHTHALATE	0.200 U	0.39	0.200	0.078	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-OCTYL PHTHALATE	0.200 U	0.39	0.200	0.069	mg/kg	11/17/15	11/18/15
EPA 8270D	DIETHYL PHTHALATE	0.200 U	0.39	0.200	0.074	mg/kg	11/17/15	11/18/15
EPA 8270D	DIMETHYL PHTHALATE	0.200 U	0.39	0.200	0.075	mg/kg	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	59.5	35-125			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	40.8 #	45-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	72.7	35-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	68.4	35-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: PHENOL (S)	79.0	40-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	67.2	30-125			%	11/17/15	11/18/15

= Recovery (or RPD) is outside QC limits.

Quant Method: Y1117.M
Run #: 1117Y059
Instrument: Yoda
Sequence: Y151117
Dilution Factor: 1
Initials: RP

Printed: 11/25/15 3:03:29 PM
.PPL-F1-SC-MCRes/MCQL-REG MDLs-DO

EPA 8270D SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006P
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24397
QCG: #87DJU-151117A-202360

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 15.3 Percent Moisture.)								
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	0.200 U	0.78	0.200	0.073	mg/kg	11/17/15	11/18/15
EPA 8270D	BUTYL BENZYL PHTHALATE	0.200 U	0.39	0.200	0.066	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-BUTYL PHTHALATE	0.200 U	0.39	0.200	0.078	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-OCTYL PHTHALATE	0.200 U	0.39	0.200	0.068	mg/kg	11/17/15	11/18/15
EPA 8270D	DIETHYL PHTHALATE	0.200 U	0.39	0.200	0.073	mg/kg	11/17/15	11/18/15
EPA 8270D	DIMETHYL PHTHALATE	0.200 U	0.39	0.200	0.074	mg/kg	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	62.0	35-125			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	46.1	45-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	74.4	35-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	69.9	35-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: PHENOL (S)	80.7	40-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	63.0	30-125			%	11/17/15	11/18/15

Quant Method: Y1117.M
Run #: 1117Y060
Instrument: Yoda
Sequence: Y151117
Dilution Factor: 1
Initials: RP

Printed: 11/25/15 3:03:29 PM
.PPL-F1-SC-MCRes/MCQL-REG MDLs-DO

EPA 8270D SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SB50-1618
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24398
QCG: #87DJU-151117A-202360

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 21.2 Percent Moisture.)								
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	0.210 U	0.84	0.210	0.079	mg/kg	11/17/15	11/18/15
EPA 8270D	BUTYL BENZYL PHTHALATE	0.210 U	0.42	0.210	0.071	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-BUTYL PHTHALATE	0.210 U	0.42	0.210	0.084	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-OCTYL PHTHALATE	0.210 U	0.42	0.210	0.074	mg/kg	11/17/15	11/18/15
EPA 8270D	DIETHYL PHTHALATE	0.210 U	0.42	0.210	0.079	mg/kg	11/17/15	11/18/15
EPA 8270D	DIMETHYL PHTHALATE	0.210 U	0.42	0.210	0.080	mg/kg	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	72.7	35-125			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	61.1	45-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	69.5	35-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	71.1	35-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: PHENOL (S)	73.4	40-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	79.3	30-125			%	11/17/15	11/18/15

Quant Method: Y1117.M
Run #: 1117Y061
Instrument: Yoda
Sequence: Y151117
Dilution Factor: 1
Initials: RP

Printed: 11/25/15 3:03:29 PM
.PPL-F1-SC-MCRes/MCPQL-REG MDLs-DO

EPA 8270D SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS51-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24399
QCG: #87DJU-151117A-202360

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 23.6 Percent Moisture.)								
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	0.220 U	0.86	0.220	0.081	mg/kg	11/17/15	11/18/15
EPA 8270D	BUTYL BENZYL PHTHALATE	0.220 U	0.43	0.220	0.073	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-BUTYL PHTHALATE	0.220 U	0.43	0.220	0.086	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-OCTYL PHTHALATE	0.220 U	0.43	0.220	0.076	mg/kg	11/17/15	11/18/15
EPA 8270D	DIETHYL PHTHALATE	0.220 U	0.43	0.220	0.081	mg/kg	11/17/15	11/18/15
EPA 8270D	DIMETHYL PHTHALATE	0.220 U	0.43	0.220	0.082	mg/kg	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	76.9	35-125			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	58.9	45-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	66.6	35-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	71.5	35-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: PHENOL (S)	75.6	40-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	71.6	30-125			%	11/17/15	11/18/15

Quant Method: Y1117.M
Run #: 1117Y062
Instrument: Yoda
Sequence: Y151117
Dilution Factor: 1
Initials: RP

Printed: 11/25/15 3:03:29 PM
.PPL-F1-SC-MCRes/MCPQL-REG MDLs-DO

EPA 8270D SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS52-0006
Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24400
QCG: #87DJU-151117A-202360

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 19.0 Percent Moisture.)								
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	0.210 U	0.81	0.210	0.077	mg/kg	11/17/15	11/18/15
EPA 8270D	BUTYL BENZYL PHTHALATE	0.210 U	0.41	0.210	0.069	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-BUTYL PHTHALATE	0.210 U	0.41	0.210	0.081	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-OCTYL PHTHALATE	0.210 U	0.41	0.210	0.072	mg/kg	11/17/15	11/18/15
EPA 8270D	DIETHYL PHTHALATE	0.210 U	0.41	0.210	0.077	mg/kg	11/17/15	11/18/15
EPA 8270D	DIMETHYL PHTHALATE	0.210 U	0.41	0.210	0.078	mg/kg	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	49.3	35-125			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	33.3 #	45-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	63.0	35-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	61.0	35-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: PHENOL (S)	69.4	40-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	62.0	30-125			%	11/17/15	11/18/15

= Recovery (or RPD) is outside QC limits.

Quant Method: Y1117.M
Run #: 1117Y063
Instrument: Yoda
Sequence: Y151117
Dilution Factor: 1
Initials: RP

Printed: 11/25/15 3:03:29 PM
PPL-F1-SC-MCRes/MCQL-REG MDLs-DO

EPA 8270D SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS53-0006
Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24401
QCG: #87DJU-151117A-202360

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 18.6 Percent Moisture.)								
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	0.210 U	0.81	0.210	0.076	mg/kg	11/17/15	11/18/15
EPA 8270D	BUTYL BENZYL PHTHALATE	0.210 U	0.41	0.210	0.069	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-BUTYL PHTHALATE	0.210 U	0.41	0.210	0.081	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-OCTYL PHTHALATE	0.210 U	0.41	0.210	0.071	mg/kg	11/17/15	11/18/15
EPA 8270D	DIETHYL PHTHALATE	0.210 U	0.41	0.210	0.076	mg/kg	11/17/15	11/18/15
EPA 8270D	DIMETHYL PHTHALATE	0.210 U	0.41	0.210	0.077	mg/kg	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	77.1	35-125			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	53.9	45-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	73.6	35-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	75.6	35-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: PHENOL (S)	79.6	40-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	79.8	30-125			%	11/17/15	11/18/15

Quant Method: Y1117.M
Run #: 1117Y066
Instrument: Yoda
Sequence: Y151117
Dilution Factor: 1
Initials: RP

Printed: 11/25/15 3:03:29 PM
PPL-F1-SC-MCRes/MCPQL-REG MDLs-DO

EPA 8270DForm 2 & 8**Surrogate Recovery**

Lab Name: APPL, Inc.

SDG No: 77838

Case No: 77838

Date Analyzed: 11/18/15

Matrix: SOIL

Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151117A-BLK	Blank	35-125	75.2		45-105	66.3	
151117A-LCS	Lab Control Spike	35-125	81.6		45-105	75.7	
AZ24396	S67-SS50-0006	35-125	59.5		45-105	40.8	#
AZ24397	S67-SS50-0006P	35-125	62.0		45-105	46.1	
AZ24398	S67-SB50-1618	35-125	72.7		45-105	61.1	
AZ24399	S67-SS51-0006	35-125	76.9		45-105	58.9	
AZ24400	S67-SS52-0006	35-125	49.3		45-105	33.3	#
AZ24401-MS	Matrix Spike	35-125	81.3		45-105	59.5	
AZ24401-MSD	Matrix SpikeD	35-125	78.4		45-105	62.8	
AZ24401	S67-SS53-0006	35-125	77.1		45-105	53.9	

Comments: Batch: #87DJU-151117A

= Recovery outside of Control Limits on Sample.

Printed: 11/25/15 3:03:10 PM

Form 2 & 8, Surrogate Recovery Summary

EPA 8270DForm 2 & 8**Surrogate Recovery**

Lab Name: APPL, Inc.

SDG No: 77838

Case No: 77838

Date Analyzed: 11/18/15

Matrix: SOIL

Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151117A-BLK	Blank	35-105	63.4		35-100	63.3	
151117A-LCS	Lab Control Spike	35-105	78.4		35-100	77.8	
AZ24396	S67-SS50-0006	35-105	72.7		35-100	68.4	
AZ24397	S67-SS50-0006P	35-105	74.4		35-100	69.9	
AZ24398	S67-SB50-1618	35-105	69.5		35-100	71.1	
AZ24399	S67-SS51-0006	35-105	66.6		35-100	71.5	
AZ24400	S67-SS52-0006	35-105	63.0		35-100	61.0	
AZ24401-MS	Matrix Spike	35-105	78.3		35-100	79.6	
AZ24401-MSD	Matrix SpikeD	35-105	70.9		35-100	73.9	
AZ24401	S67-SS53-0006	35-105	73.6		35-100	75.6	

Comments: Batch: #87DJU-151117A

Printed: 11/25/15 3:03:11 PM

Form 2 & 8, Surrogate Recovery Summary

EPA 8270D**Form 2 & 8****Surrogate Recovery**

Lab Name: APPL, Inc.

SDG No: 77838

Case No: 77838

Date Analyzed: 11/18/15

Matrix: SOIL

Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151117A-BLK	Blank	40-100	70.1		30-125	77.6	
151117A-LCS	Lab Control Spike	40-100	82.6		30-125	80.2	
AZ244396	S67-SS50-0006	40-100	79.0		30-125	67.2	
AZ244397	S67-SS50-0006P	40-100	80.7		30-125	63.0	
AZ244398	S67-SB50-1618	40-100	73.4		30-125	79.3	
AZ244399	S67-SS51-0006	40-100	75.6		30-125	71.6	
AZ244400	S67-SS52-0006	40-100	69.4		30-125	62.0	
AZ244401-MS	Matrix Spike	40-100	83.2		30-125	74.8	
AZ244401-MSD	Matrix SpikeD	40-100	75.4		30-125	70.0	
AZ244401	S67-SS53-0006	40-100	79.6		30-125	79.8	

Comments: Batch: #87DJU-151117A

Printed: 11/25/15 3:03:11 PM

Form 2 & 8, Surrogate Recovery Summary

Method Blank
EPA 8270D SOILS

Blank Name/QCG: **151117S-24401 - 202360**
 Batch ID: #87DJU-151117A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BIS (2-ETHYLHEXYL) PHTHALATE	0.167 U	0.66	0.167	0.062	mg/kg	11/17/15	11/18/15
BLANK	BUTYL BENZYL PHTHALATE	0.167 U	0.33	0.167	0.056	mg/kg	11/17/15	11/18/15
BLANK	DI-N-BUTYL PHTHALATE	0.167 U	0.33	0.167	0.066	mg/kg	11/17/15	11/18/15
BLANK	DI-N-OCTYL PHTHALATE	0.167 U	0.33	0.167	0.058	mg/kg	11/17/15	11/18/15
BLANK	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	11/17/15	11/18/15
BLANK	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	11/17/15	11/18/15
BLANK	SURROGATE: 2,4,6-TRIBROMOP	75.2	35-125			%	11/17/15	11/18/15
BLANK	SURROGATE: 2-FLUORBIPHENY	66.3	45-105			%	11/17/15	11/18/15
BLANK	SURROGATE: 2-FLUOROPHENO	63.4	35-105			%	11/17/15	11/18/15
BLANK	SURROGATE: NITROBENZENE-	63.3	35-100			%	11/17/15	11/18/15
BLANK	SURROGATE: PHENOL (S)	70.1	40-100			%	11/17/15	11/18/15
BLANK	SURROGATE: TERPHENYL-D14 (	77.6	30-125			%	11/17/15	11/18/15

Quant Method: Y1117.M
 Run #: 1117Y057
 Instrument: Yoda
 Sequence: Y151117
 Initials: RP

GC SC-Blank-REG MDLs-DOD
 Printed: 11/25/15 3:03:26 PM

Laboratory Control Spike Recovery
EPA 8270D SOILS

APPL ID: 151117S-24401 LCS - 202360

Batch ID: #87DJU-151117A

APPL Inc.

908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level	SPK Result	SPK % Recovery	Recovery Limits
	mg/kg	mg/kg	Recovery	Limits
BIS (2-ETHYLHEXYL) PHTHALATE	1.67	1.37	82.0	45-125
BUTYL BENZYL PHTHALATE	1.67	1.37	82.0	50-125
DI-N-BUTYL PHTHALATE	1.67	1.31	78.4	55-110
DI-N-OCTYL PHTHALATE	1.67	1.37	82.0	40-130
DIETHYL PHTHALATE	1.67	1.27	76.0	50-115
DIMETHYL PHTHALATE	1.67	1.26	75.4	50-110
SURROGATE: 2,4,6-TRIBROMOPHENOL	6.67	5.44	81.6	35-125
SURROGATE: 2-FLUORBIPHENYL (S)	3.33	2.52	75.7	45-105
SURROGATE: 2-FLUOROPHENOL (S)	6.67	5.23	78.4	35-105
SURROGATE: NITROBENZENE-D5 (S)	3.33	2.59	77.8	35-100
SURROGATE: PHENOL (S)	6.67	5.51	82.6	40-100
SURROGATE: TERPHENYL-D14 (S)	3.33	2.67	80.2	30-125

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	Y1117.M
Extraction Date :	11/17/15
Analysis Date :	11/18/15
Instrument :	Yoda
Run :	1117Y058
Initials :	RP

Printed: 11/25/15 3:03:20 PM
 APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D SOILS

APPL ID: 151117S-24401 MS - 202360

Batch ID: #87DJU-151117A

Sample ID: AZ24401

Client ID: S67-SS53-0006

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Lvl	Matrix Result	SPK Result	DUP Result	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	Recovery	Recovery	Limits	%	Limits
BIS (2-ETHYLHEXYL) PHTHALATE	1.67	0.017	1.36	1.25	80.4	73.8	45-125	8.4	30
BUTYL BENZYL PHTHALATE	1.67	ND	1.33	1.25	79.6	74.9	50-125	6.2	30
DI-N-BUTYL PHTHALATE	1.67	ND	1.32	1.21	79.0	72.5	55-110	8.7	30
DI-N-OCTYL PHTHALATE	1.67	ND	1.38	1.26	82.6	75.4	40-130	9.1	30
DIETHYL PHTHALATE	1.67	ND	1.28	1.24	76.6	74.3	50-115	3.2	30
DIMETHYL PHTHALATE	1.67	ND	1.37	1.33	82.0	79.6	50-110	3.0	30
SURROGATE: 2,4,6-TRIBROMOPHENOL	6.67	NA	5.42	5.23	81.3	78.4	35-125		
SURROGATE: 2-FLUORBIPHENYL (S)	3.33	NA	1.98	2.09	59.5	62.8	45-105		
SURROGATE: 2-FLUOROPHENOL (S)	6.67	NA	5.22	4.73	78.3	70.9	35-105		
SURROGATE: NITROBENZENE-D5 (S)	3.33	NA	2.65	2.46	79.6	73.9	35-100		
SURROGATE: PHENOL (S)	6.67	NA	5.55	5.03	83.2	75.4	40-100		
SURROGATE: TERPHENYL-D14 (S)	3.33	NA	2.49	2.33	74.8	70.0	30-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	Y1117.M	Y1117.M
Extraction Date :	11/17/15	11/17/15
Analysis Date :	11/18/15	11/18/15
Instrument :	Yoda	Yoda
Run :	1117Y064	1117Y065
Initials :	RP	

Printed: 11/25/15 3:03:14 PM
APPL MSD SCII

EPA 8270DForm 4**Blank Summary**

Lab Name: APPL, Inc.

SDG No: 77838

Case No: 77838

Date Analyzed: 11/18/15

Matrix: SOIL

Instrument: Yoda

Blank ID: 151117A-BLK

Time Analyzed: 1738

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151117A-BLK	Blank	1117Y057	11/18/15 1738
151117A-LCS	Lab Control Spike	1117Y058	11/18/15 1807
AZ24396	S67-SS50-0006	1117Y059	11/18/15 1836
AZ24397	S67-SS50-0006P	1117Y060	11/18/15 1905
AZ24398	S67-SB50-1618	1117Y061	11/18/15 1934
AZ24399	S67-SS51-0006	1117Y062	11/18/15 2003
AZ24400	S67-SS52-0006	1117Y063	11/18/15 2031
151117A-MS	Matrix Spike	1117Y064	11/18/15 2100
151117A-MSD	Matrix SpikeD	1117Y065	11/18/15 2129
AZ24401	S67-SS53-0006	1117Y066	11/18/15 2158

Comments: Batch: #87DJU-151117A

Printed: 11/25/15 3:03:07 PM
Form 4, Blank Summary

EPA 8270D LL SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24396
QCG: #SIMDD-151117A-202551

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 15.9 Percent Moisture.)							
8270D-LL	2-METHYLNAPHTHALENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHENE	0.006 U	0.006	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHYLENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	ANTHRACENE	0.006 U	0.006	0.0010	mg/kg	11/17/15	11/22/15
8270D-LL	BENZ (A) ANTHRACENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (A) PYRENE	0.0066	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (B) FLUORANTHENE	0.0017 J	0.006	0.0013	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (G,H,I) PERYLENE	0.016	0.006	0.0015	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (K) FLUORANTHENE	0.006 U	0.006	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	CHRYSENE	0.0054 J	0.006	0.0010	mg/kg	11/17/15	11/22/15
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.0050 J	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORANTHENE	0.006 U	0.006	0.0014	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORENE	0.006 U	0.006	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.0080	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	NAPHTHALENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	PHENANTHRENE	0.0024 J	0.006	0.0013	mg/kg	11/17/15	11/22/15
8270D-LL	PYRENE	0.0072	0.006	0.0014	mg/kg	11/17/15	11/22/15
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	66.5	45-105		%	11/17/15	11/22/15
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	90.4	35-100		%	11/17/15	11/22/15
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	62.8	30-125		%	11/17/15	11/22/15

J = Estimated value.

Quant Method: P1112.M
Run #: 1112L178
Instrument: Linus
Sequence: L151112
Dilution Factor: 1
Initials: DA

Printed: 11/28/2015 12:27:03 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8270D LL SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006P
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24397
QCG: #SIMDD-151117A-202551

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 15.3 Percent Moisture.)							
8270D-LL	2-METHYLNAPHTHALENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHENE	0.006 U	0.006	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHYLENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	ANTHRACENE	0.006 U	0.006	0.0009	mg/kg	11/17/15	11/22/15
8270D-LL	BENZ (A) ANTHRACENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (A) PYRENE	0.0028 J	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (B) FLUORANTHENE	0.006 U	0.006	0.0013	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (G,H,I) PERYLENE	0.0098	0.006	0.0015	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (K) FLUORANTHENE	0.006 U	0.006	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	CHRYSENE	0.0036 J	0.006	0.0009	mg/kg	11/17/15	11/22/15
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.0023 J	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORANTHENE	0.006 U	0.006	0.0014	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORENE	0.006 U	0.006	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.0052 J	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	NAPHTHALENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	PHENANTHRENE	0.0038 J	0.006	0.0013	mg/kg	11/17/15	11/22/15
8270D-LL	PYRENE	0.014	0.006	0.0014	mg/kg	11/17/15	11/22/15
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	70.0	45-105		%	11/17/15	11/22/15
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	95.4	35-100		%	11/17/15	11/22/15
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	68.1	30-125		%	11/17/15	11/22/15

J = Estimated value.

Quant Method: P1112.M
Run #: 1112L179
Instrument: Linus
Sequence: L151112
Dilution Factor: 1
Initials: DA

Printed: 11/28/2015 12:27:03 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8270D LL SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SB50-1618
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24398
QCG: #SIMDD-151117A-202551

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 21.2 Percent Moisture.)							
8270D-L ^L	2-METHYLNAPHTHALENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-L ^L	ACENAPHTHENE	0.006 U	0.006	0.0013	mg/kg	11/17/15	11/22/15
8270D-L ^L	ACENAPHTHYLENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-L ^L	ANTHRACENE	0.006 U	0.006	0.0010	mg/kg	11/17/15	11/22/15
8270D-L ^L	BENZ (A) ANTHRACENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-L ^L	BENZO (A) PYRENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-L ^L	BENZO (B) FLUORANTHENE	0.006 U	0.006	0.0014	mg/kg	11/17/15	11/22/15
8270D-L ^L	BENZO (G,H,I) PERYLENE	0.010	0.006	0.0016	mg/kg	11/17/15	11/22/15
8270D-L ^L	BENZO (K) FLUORANTHENE	0.006 U	0.006	0.0013	mg/kg	11/17/15	11/22/15
8270D-L ^L	CHRYSENE	0.0046 J	0.006	0.0010	mg/kg	11/17/15	11/22/15
8270D-L ^L	DIBENZ (A,H) ANTHRACENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-L ^L	FLUORANTHENE	0.006 U	0.006	0.0015	mg/kg	11/17/15	11/22/15
8270D-L ^L	FLUORENE	0.006 U	0.006	0.0013	mg/kg	11/17/15	11/22/15
8270D-L ^L	INDENO (1,2,3-CD) PYRENE	0.0050 J	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-L ^L	NAPHTHALENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-L ^L	PHENANTHRENE	0.006 U	0.006	0.0014	mg/kg	11/17/15	11/22/15
8270D-L ^L	PYRENE	0.006 U	0.006	0.0015	mg/kg	11/17/15	11/22/15
8270D-L ^L	SURROGATE: 2-FLUORBIPHENYL (S)	74.4	45-105		%	11/17/15	11/22/15
8270D-L ^L	SURROGATE: NITROBENZENE-D5 (S)	96.2	35-100		%	11/17/15	11/22/15
8270D-L ^L	SURROGATE: TERPHENYL-D14 (S)	83.9	30-125		%	11/17/15	11/22/15

J = Estimated value.

Quant Method: P1112.M
Run #: 1112L180
Instrument: Linus
Sequence: L151112
Dilution Factor: 1
Initials: DA

Printed: 11/28/2015 12:27:03 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

EPA 8270D LL SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS51-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24399
QCG: #SIMDD-151117A-202551

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 23.6 Percent Moisture.)								
8270D-LL	2-METHYLNAPHTHALENE	0.0220 U	0.065	0.0220	0.0120	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHENE	0.0220 U	0.065	0.0220	0.0130	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHYLENE	0.014 J	0.065	0.0220	0.0120	mg/kg	11/17/15	11/22/15
8270D-LL	ANTHRACENE	0.016 J	0.065	0.0220	0.0100	mg/kg	11/17/15	11/22/15
8270D-LL	BENZ (A) ANTHRACENE	0.061 J	0.065	0.0220	0.0120	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (A) PYRENE	0.11	0.065	0.0220	0.0120	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (B) FLUORANTHENE	0.12	0.065	0.0220	0.0140	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (G,H,I) PERYLENE	0.13	0.065	0.0220	0.0170	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (K) FLUORANTHENE	0.0220 U	0.065	0.0220	0.0130	mg/kg	11/17/15	11/22/15
8270D-LL	CHRYSENE	0.22	0.065	0.0220	0.0100	mg/kg	11/17/15	11/22/15
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.033 J	0.065	0.0220	0.0120	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORANTHENE	0.47	0.065	0.0220	0.0160	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORENE	0.0220 U	0.065	0.0220	0.0130	mg/kg	11/17/15	11/22/15
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.072	0.065	0.0220	0.0120	mg/kg	11/17/15	11/22/15
8270D-LL	NAPHTHALENE	0.0220 U	0.065	0.0220	0.0120	mg/kg	11/17/15	11/22/15
8270D-LL	PHENANTHRENE	0.18	0.065	0.0220	0.0140	mg/kg	11/17/15	11/22/15
8270D-LL	PYRENE	0.30	0.065	0.0220	0.0160	mg/kg	11/17/15	11/22/15
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	DO	45-105			%	11/17/15	11/22/15
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	DO	35-100			%	11/17/15	11/22/15
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	DO	30-125			%	11/17/15	11/22/15

J = Estimated value.
DO = Diluted Out.

Quant Method: P1112.M
Run #: 1112L181
Instrument: Linus
Sequence: L151112
Dilution Factor: 10
Initials: DA

Printed: 11/28/2015 12:44:26 PM
PPL-F1-SC-MCRes/MCPQL-REG MDLs-DO

EPA 8270D LL SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS52-0006
Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24400
QCG: #SIMDD-151117A-202551

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 19.0 Percent Moisture.)								
8270D-LL	2-METHYLNAPHTHALENE	0.0021 U	0.006	0.0021	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHENE	0.0032 J	0.006	0.0021	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHYLENE	0.0053 J	0.006	0.0021	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	ANTHRACENE	0.013	0.006	0.0021	0.0010	mg/kg	11/17/15	11/22/15
8270D-LL	BENZ (A) ANTHRACENE	0.036	0.006	0.0021	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (A) PYRENE	0.028	0.006	0.0021	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (B) FLUORANTHENE	0.045	0.006	0.0021	0.0014	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (G,H,I) PERYLENE	0.023	0.006	0.0021	0.0016	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (K) FLUORANTHENE	0.0028 J	0.006	0.0021	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	CHRYSENE	0.043	0.006	0.0021	0.0010	mg/kg	11/17/15	11/22/15
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.0075	0.006	0.0021	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORANTHENE	0.097	0.006	0.0021	0.0015	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORENE	0.0045 J	0.006	0.0021	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.015	0.006	0.0021	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	NAPHTHALENE	0.0032 J	0.006	0.0021	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	PHENANTHRENE	0.090	0.006	0.0021	0.0014	mg/kg	11/17/15	11/22/15
8270D-LL	PYRENE	0.065	0.006	0.0021	0.0015	mg/kg	11/17/15	11/22/15
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	67.3	45-105			%	11/17/15	11/22/15
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	93.0	35-100			%	11/17/15	11/22/15
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	78.0	30-125			%	11/17/15	11/22/15

J = Estimated value.

Quant Method: P1112.M
Run #: 1112L182
Instrument: Linus
Sequence: L151112
Dilution Factor: 1
Initials: DA

Printed: 11/25/2015 8:52:12 AM
IPPL-F1-SC-MCRes/MCPQL-REG MDLs-DO

EPA 8270D LL SOILS

Tetra Tech
 5700 Lake Wright Dr, Ste 309
 Norfolk, VA 23502

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Attn: Ed Corack
 Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS53-0006
 Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24401
 QCG: #SIMDD-151117A-202551

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 18.6 Percent Moisture.)								
8270D-LL	2-METHYLNAPHTHALENE	0.0021 U	0.006	0.0021	0.0011	mg/kg	11/17/15	11/23/15
8270D-LL	ACENAPHTHENE	0.0021 U	0.006	0.0021	0.0012	mg/kg	11/17/15	11/23/15
8270D-LL	ACENAPHTHYLENE	0.0021 U	0.006	0.0021	0.0011	mg/kg	11/17/15	11/23/15
8270D-LL	ANTHRACENE	0.0021 U	0.006	0.0021	0.0010	mg/kg	11/17/15	11/23/15
8270D-LL	BENZ (A) ANTHRACENE	0.0030 J	0.006	0.0021	0.0011	mg/kg	11/17/15	11/23/15
8270D-LL	BENZO (A) PYRENE	0.0027 J	0.006	0.0021	0.0011	mg/kg	11/17/15	11/23/15
8270D-LL	BENZO (B) FLUORANTHENE	0.0021 U	0.006	0.0021	0.0014	mg/kg	11/17/15	11/23/15
8270D-LL	BENZO (G,H,I) PERYLENE	0.0090	0.006	0.0021	0.0016	mg/kg	11/17/15	11/23/15
8270D-LL	BENZO (K) FLUORANTHENE	0.0021 U	0.006	0.0021	0.0012	mg/kg	11/17/15	11/23/15
8270D-LL	CHRYSENE	0.0028 J	0.006	0.0021	0.0010	mg/kg	11/17/15	11/23/15
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.0023 J	0.006	0.0021	0.0011	mg/kg	11/17/15	11/23/15
8270D-LL	FLUORANTHENE	0.0039 J	0.006	0.0021	0.0015	mg/kg	11/17/15	11/23/15
8270D-LL	FLUORENE	0.0021 U	0.006	0.0021	0.0012	mg/kg	11/17/15	11/23/15
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.0042 J	0.006	0.0021	0.0011	mg/kg	11/17/15	11/23/15
8270D-LL	NAPHTHALENE	0.0021 U	0.006	0.0021	0.0011	mg/kg	11/17/15	11/23/15
8270D-LL	PHENANTHRENE	0.0018 J	0.006	0.0021	0.0014	mg/kg	11/17/15	11/23/15
8270D-LL	PYRENE	0.0035 J	0.006	0.0021	0.0015	mg/kg	11/17/15	11/23/15
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	71.2	45-105			%	11/17/15	11/23/15
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	89.6	35-100			%	11/17/15	11/23/15
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	80.1	30-125			%	11/17/15	11/23/15

J = Estimated value.

Quant Method: P1112.M
 Run #: 1112L185
 Instrument: Linus
 Sequence: L151112
 Dilution Factor: 1
 Initials: DA

Printed: 11/25/2015 8:52:12 AM
 IPPL-F1-SC-MCRes/MCQL-REG MDLs-DO

8270D-LL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc.

SDG No: 77838

Case No: 77838

Date Analyzed: 11/22/2015

Matrix: SOIL

Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151117A-BLK	Blank	45-105	53.8		35-100	67.2	
151117A-LCS	Lab Control Spike	45-105	65.9		35-100	74.9	
AZ24396	S67-SS50-0006	45-105	66.5		35-100	90.4	
AZ24397	S67-SS50-0006P	45-105	70.0		35-100	95.4	
AZ24398	S67-SB50-1618	45-105	74.4		35-100	96.2	
AZ24399	S67-SS51-0006	45-105	DO		35-100	DO	
AZ24400	S67-SS52-0006	45-105	67.3		35-100	93.0	
AZ24401-MS	Matrix Spike	45-105	75.4		35-100	95.4	
AZ24401	S67-SS53-0006	45-105	71.2		35-100	89.6	
AZ24401-MSD	Matrix SpikeD	45-105	87.2		35-100	101	*

Comments: Batch: #SIMDD-151117A

* = Recovery outside of Control Limits on QC Sample.

Printed: 11/28/2015 12:46:59 PM

Form 2 & 8, Surrogate Recovery Summary

8270D-LLForm 2 & 8**Surrogate Recovery**

Lab Name: APPL, Inc.

SDG No: 77838

Case No: 77838

Date Analyzed: 11/22/2015

Matrix: SOIL

Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
151117A-BLK	Blank	30-125	76.8				
151117A-LCS	Lab Control Spike	30-125	84.5				
AZ24396	S67-SS50-0006	30-125	62.8				
AZ24397	S67-SS50-0006P	30-125	68.1				
AZ24398	S67-SB50-1618	30-125	83.9				
AZ24399	S67-SS51-0006	30-125	DO				
AZ24400	S67-SS52-0006	30-125	78.0				
AZ24401-MS	Matrix Spike	30-125	80.6				
AZ24401	S67-SS53-0006	30-125	80.1				
AZ24401-MSD	Matrix SpikeD	30-125	90.8				

Comments: Batch: #SIMDD-151117A

Printed: 11/28/2015 12:46:59 PM

Form 2 & 8, Surrogate Recovery Summary

Method Blank
EPA 8270D LL SOILS

APPL Inc.

908 North Temperance Avenue
Clovis, CA 93611

Blank Name/QCG: 151117S-24401 - 202551

Batch ID: #SIMDD-151117A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	11/17/2015	11/22/2015
BLANK	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	ANTHRACENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	11/17/2015	11/22/2015
BLANK	BENZ (A) ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	BENZO (A) PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	BENZO (B) FLUORANTHENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	11/17/2015	11/22/2015
BLANK	BENZO (G,H,I) PERYLENE	0.0017 U	0.005	0.0017	0.0013	mg/kg	11/17/2015	11/22/2015
BLANK	BENZO (K) FLUORANTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	11/17/2015	11/22/2015
BLANK	CHRYSENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	11/17/2015	11/22/2015
BLANK	DIBENZ (A,H) ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	FLUORANTHENE	0.0017 U	0.005	0.0017	0.0012	mg/kg	11/17/2015	11/22/2015
BLANK	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	11/17/2015	11/22/2015
BLANK	INDENO (1,2,3-CD) PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	NAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	PHENANTHRENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	11/17/2015	11/22/2015
BLANK	PYRENE	0.0017 U	0.005	0.0017	0.0012	mg/kg	11/17/2015	11/22/2015
BLANK	SURROGATE: 2-FLUORBIPHENY	53.8	45-105			%	11/17/2015	11/22/2015
BLANK	SURROGATE: NITROBENZENE-	67.2	35-100			%	11/17/2015	11/22/2015
BLANK	SURROGATE: TERPHENYL-D14 (	76.8	30-125			%	11/17/2015	11/22/2015

Quant Method: P1112.M
Run #: 1112L176
Instrument: Linus
Sequence: L151112
Initials: DA

GC SC-Blank-REG MDLs-DOD
Printed: 11/25/2015 8:52:44 AM

Laboratory Control Spike Recovery

EPA 8270D LL SOILS

APPL ID: **151117S-24401 LCS - 202551**

Batch ID: #SIMDD-151117A

APPL Inc.

908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level	SPK Result	SPK % Recovery	Recovery
	mg/kg	mg/kg	Recovery	Limits
2-METHYLNAPHTHALENE	0.167	0.0984	58.9	45-105
ACENAPHTHENE	0.167	0.125	74.9	45-110
ACENAPHTHYLENE	0.167	0.120	71.9	45-105
ANTHRACENE	0.167	0.139	83.2	55-105
BENZ (A) ANTHRACENE	0.167	0.154	92.2	50-110
BENZO (A) PYRENE	0.167	0.149	89.2	50-110
BENZO (B) FLUORANTHENE	0.167	0.139	83.2	45-115
BENZO (G,H,I) PERYLENE	0.167	0.126	75.4	40-125
BENZO (K) FLUORANTHENE	0.167	0.150	89.8	45-125
CHRYSENE	0.167	0.146	87.4	55-110
DIBENZ (A,H) ANTHRACENE	0.167	0.133	79.6	40-125
FLUORANTHENE	0.167	0.150	89.8	55-115
FLUORENE	0.167	0.131	78.4	50-110
INDENO (1,2,3-CD) PYRENE	0.167	0.116	69.5	40-120
NAPHTHALENE	0.167	0.109	65.3	40-105
PHENANTHRENE	0.167	0.142	85.0	50-110
PYRENE	0.167	0.151	90.4	45-125
SURROGATE: 2-FLUORBIPHENYL (S)	0.083	0.0547	65.9	45-105
SURROGATE: NITROBENZENE-D5 (S)	0.083	0.0622	74.9	35-100
SURROGATE: TERPHENYL-D14 (S)	0.083	0.0701	84.5	30-125

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	P1112.M
Extraction Date :	11/17/2015
Analysis Date :	11/22/2015
Instrument :	Linus
Run :	1112L177
Initials :	DA

Printed: 11/25/2015 8:52:30 AM

APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D LL SOILS

APPL ID: **151117S-24401 MS - 202551**

Batch ID: #SIMDD-151117A

Sample ID: AZ24401

Client ID: S67-SS53-0006

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-METHYLNAPHTHALENE	0.133	ND	0.119	0.136	89.5	102	45-105	13.3	30
ACENAPHTHENE	0.167	ND	0.143	0.166	85.6	99.4	45-110	14.9	30
ACENAPHTHYLENE	0.167	ND	0.145	0.162	86.8	97.0	45-105	11.1	30
ANTHRACENE	0.167	ND	0.138	0.158	82.6	94.6	55-105	13.5	30
BENZ (A) ANTHRACENE	0.167	0.0024	0.161	0.177	95.0	105	50-110	9.5	30
BENZO (A) PYRENE	0.167	0.0022	0.141	0.167	83.1	98.7	50-110	16.9	30
BENZO (B) FLUORANTHENE	0.167	ND	0.134	0.171	80.2	102	45-115	24.3	30
BENZO (G,H,I) PERYLENE	0.167	0.0073	0.115	0.176	64.5	101	40-125	41.9 #	30
BENZO (K) FLUORANTHENE	0.167	ND	0.150	0.161	89.8	96.4	45-125	7.1	30
CHRYSENE	0.167	0.0023	0.134	0.161	78.9	95.0	55-110	18.3	30
DIBENZ (A,H) ANTHRACENE	0.167	0.0019	0.122	0.177	71.9	105	40-125	36.8 #	30
FLUORANTHENE	0.167	0.0032	0.153	0.178	89.7	105	55-115	15.1	30
FLUORENE	0.167	ND	0.148	0.170	88.6	102	50-110	13.8	30
INDENO (1,2,3-CD) PYRENE	0.167	0.0035	0.108	0.170	62.6	99.7	40-120	44.6 #	30
NAPHTHALENE	0.167	ND	0.128	0.146	76.6	87.4	40-105	13.1	30
PHENANTHRENE	0.167	0.0014	0.144	0.171	85.4	102	50-110	17.1	30
PYRENE	0.167	0.0028	0.151	0.170	88.7	100	45-125	11.8	30
SURROGATE: 2-FLUORBIPHENYL (S)	0.083	NA	0.0626	0.0724	75.4	87.2	45-105		
SURROGATE: NITROBENZENE-D5 (S)	0.083	NA	0.0792	0.084	95.4	101 #	35-100		
SURROGATE: TERPHENYL-D14 (S)	0.083	NA	0.0669	0.0754	80.6	90.8	30-125		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	P1112.M	P1112.M
Extraction Date :	11/17/2015	11/17/2015
Analysis Date :	11/23/2015	11/24/2015
Instrument :	Linus	Linus
Run :	1112L183	1112L197
Initials :	DA	

Printed: 11/25/2015 8:52:28 AM

APPL MSD SCII

8270D-LL

Form 4

Blank Summary

Lab Name: APPL, Inc.
 Case No: 77838
 Matrix: SOIL
 Blank ID: 151117A-BLK

SDG No: 77838
 Date Analyzed: 11/22/2015
 Instrument: Linus
 Time Analyzed: 2110

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151117A-BLK	Blank	1112L176	11/22/2015 2110
151117A-LCS	Lab Control Spike	1112L177	11/22/2015 2137
AZ24396	S67-SS50-0006	1112L178	11/22/2015 2205
AZ24397	S67-SS50-0006P	1112L179	11/22/2015 2233
AZ24398	S67-SB50-1618	1112L180	11/22/2015 2301
AZ24399	S67-SS51-0006	1112L181	11/22/2015 2328
AZ24400	S67-SS52-0006	1112L182	11/22/2015 2356
151117A-MS	Matrix Spike	1112L183	11/23/2015 0023
AZ24401	S67-SS53-0006	1112L185	11/23/2015 0119
151117A-MSD	Matrix SpikeD	1112L197	11/24/2015 1331

Comments: Batch: #SIMDD-151117A

PERCHLORATE EPA 6850 - SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24396
QCG: #6850SM-151119A-202876

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 15.9 Percent Moisture.)								
EPA 6850	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLMFL2
Run #: TY21_008.d
Instrument: AGIL_6460
Sequence: TQ112115
Dilution Factor: 1
Initials: RP

Printed: 12/07/15 8:22:43 AM
APPL-F1-SC-MCResOnly-REG MDLs-DOD

PERCHLORATE EPA 6850 - SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006P
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24397
QCG: #6850SM-151119A-202876

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 15.3 Percent Moisture.)								
EPA 6850	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLMFL2
Run #: TY21_009.d
Instrument: AGIL_6460
Sequence: TQ112115
Dilution Factor: 1
Initials: RP

Printed: 12/07/15 8:22:43 AM
APPL-F1-SC-MCResOnly-REG MDLs-DOD

PERCHLORATE EPA 6850 - SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SB50-1618
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24398
QCG: #6850SM-151119A-202876

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 21.2 Percent Moisture.)								
EPA 6850	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLMFL2
Run #: TY21_010.d
Instrument: AGIL_6460
Sequence: TQ112115
Dilution Factor: 1
Initials: RP

Printed: 12/07/15 8:22:43 AM
APPL-F1-SC-MCResOnly-REG MDLs-DOD

PERCHLORATE EPA 6850 - SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS51-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24399
QCG: #6850SM-151119A-202876

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 23.6 Percent Moisture.)								
EPA 6850	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLMFL2
Run #: TY21_015.d
Instrument: AGIL_6460
Sequence: TQ112115
Dilution Factor: 1
Initials: RP

Printed: 12/07/15 8:22:43 AM
APPL-F1-SC-MCResOnly-REG MDLs-DOD

PERCHLORATE EPA 6850 - SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS52-0006
Sample Collection Date: 11/10/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 77838
APPL ID: AZ24400
QCG: #6850SM-151119A-202876

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 19.0 Percent Moisture.)								
EPA 6850	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLML2
Run #: TY21_016.d
Instrument: AGIL_6460
Sequence: TQ112115
Dilution Factor: 1
Initials: RP

Printed: 12/07/15 8:22:43 AM
APPL-F1-SC-MCResOnly-REG MDLs-DOD

PERCHLORATE EPA 6850 - SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS53-0006
Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24401
QCG: #6850SM-151119A-202876

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 18.6 Percent Moisture.)								
EPA 6850	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLMFL2
Run #: TY21_017.d
Instrument: AGIL_6460
Sequence: TQ112115
Dilution Factor: 1
Initials: RP

Printed: 12/07/15 8:22:43 AM
APPL-F1-SC-MCResOnly-REG MDLs-DOD

Method Blank
PERCHLORATE EPA 6850 - SOIL

Blank Name/QCG: **151119S-24401 - 202876**
Batch ID: #6850SM-151119A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLMFL2
Run #: TY21_007.d
Instrument: AGIL_6460
Sequence: TQ112115
Initials: RP

GC SC-Blank-REG MDLs-DOD
Printed: 12/07/15 8:22:47 AM

Laboratory Control Spike Recovery
PERCHLORATE EPA 6850 - SOIL

APPL ID: **151119S-24401 LCS - 202876**

Batch ID: #6850SM-151119A

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Level mg/Kg	SPK Result mg/Kg	SPK % Recovery	Recovery Limits
PERCHLORATE	0.00594	0.00501	84.3	80-120

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	QTLML2
Extraction Date :	11/19/15
Analysis Date :	11/21/15
Instrument :	AGIL_6460
Run :	TY21_005.d
Initials :	RP

Printed: 12/07/15 8:22:38 AM
APPL Standard LCS

Matrix Spike Recoveries
PERCHLORATE EPA 6850 - SOIL

APPL ID: **151119S-24401 MS - 202876**

Batch ID: #6850SM-151119A

Sample ID: AZ24401

Client ID: S67-SS53-0006

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	SPK Lvl	DUP Lvl	Matrix	SPK	DUP	SPK %	DUP %	Recovery	RPD	RPD
	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	Recovery	Recovery	Limits	%	Limits
(Solid Concentrations have been adjusted to reflect 18.6 Percent Moisture.)										
PERCHLORATE	0.00326	0.00321	ND	0.00252	0.0023	77.3 #	71.7 #	80-120	7.5	15

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	QTLMFL2	QTLMFL2
Extraction Date :	11/19/15	11/19/15
Analysis Date :	11/21/15	11/21/15
Instrument :	AGIL_6460	AGIL_6460
Run :	TY21_018.d	TY21_019.d
Initials :	RP	

Printed: 12/07/15 8:22:33 AM

APPL MSD SCII

EPA 6850

Form 4

Blank Summary

Lab Name: APPL, Inc.
 Case No: 77838
 Matrix: SOIL
 Blank ID: 151119A-BLK

SDG No: 77838
 Date Analyzed: 11/21/15
 Instrument: AGIL_6460
 Time Analyzed: 1520

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151119A-LCS	Lab Control Spike	TY21_005.d	11/21/15 1430
151119A-BLK	Blank	TY21_007.d	11/21/15 1520
AZ24396	S67-SS50-0006	TY21_008.d	11/21/15 1538
AZ24397	S67-SS50-0006P	TY21_009.d	11/21/15 1557
AZ24398	S67-SB50-1618	TY21_010.d	11/21/15 1615
AZ24399	S67-SS51-0006	TY21_015.d	11/21/15 1749
AZ24400	S67-SS52-0006	TY21_016.d	11/21/15 1807
AZ24401	S67-SS53-0006	TY21_017.d	11/21/15 1826
151119A-MS	Matrix Spike	TY21_018.d	11/21/15 1844
151119A-MSD	Matrix SpikeD	TY21_019.d	11/21/15 1903

Comments: Batch: #6850SM-151119A

EPA 8330B SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24396
QCG: #83BJU-151118A-202617

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/20/15
EPA 8330B	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/20/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	93.2	70-130			%	11/18/15	11/20/15

Quant Method: W150729.M
Run #: 1117_000144
Instrument: Waldorf
Sequence: 151117
Dilution Factor: 1
Initials: MP

Printed: 12/07/15 11:57:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8330B SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006P
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24397
QCG: #83BJU-151118A-202617

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/20/15
EPA 8330B	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/20/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	93.4	70-130			%	11/18/15	11/20/15

Quant Method: W150729.M
Run #: 1117_000145
Instrument: Waldorf
Sequence: 151117
Dilution Factor: 1
Initials: MP

Printed: 12/07/15 11:57:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8330B SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SB50-1618
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24398
QCG: #83BJU-151118A-202617

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/20/15
EPA 8330B	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/20/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	94.3	70-130			%	11/18/15	11/20/15

Quant Method: W150729.M
Run #: 1117_000146
Instrument: Waldorf
Sequence: 151117
Dilution Factor: 1
Initials: MP

Printed: 12/07/15 11:57:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8330B SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS51-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24399
QCG: #83BJU-151118A-202617

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/20/15
EPA 8330B	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/20/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	95.1	70-130			%	11/18/15	11/20/15

Quant Method: W150729.M
Run #: 1117_000147
Instrument: Waldorf
Sequence: 151117
Dilution Factor: 1
Initials: MP

Printed: 12/07/15 11:57:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8330B SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS52-0006
Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24400
QCG: #83BJU-151118A-202617

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/21/15
EPA 8330B	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/21/15
EPA 8330B	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/21/15
EPA 8330B	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/21/15
EPA 8330B	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/21/15
EPA 8330B	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/21/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	93.8	70-130			%	11/18/15	11/21/15

Quant Method: W150729.M
Run #: 1117_000148
Instrument: Waldorf
Sequence: 151117
Dilution Factor: 1
Initials: MP

Printed: 12/07/15 11:57:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8330B SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS53-0006
Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24401
QCG: #83BJU-151118A-202617

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/20/15
EPA 8330B	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/20/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	93.8	70-130			%	11/18/15	11/20/15

Quant Method: W150729.M
Run #: 1117_000150
Instrument: Waldorf
Sequence: 151117
Dilution Factor: 1
Initials: MP

Printed: 12/07/15 11:57:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8330B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc.

SDG No: 77838

Case No: 77838

Date Analyzed: 11/20/15

Matrix: SOIL

Instrument: Waldorf

APPL ID.	Client Sample No.	SURROGATE: 1,2-DINITROBENZENE (S)				Limits	Result
		Limits	Result	Qualifier	Limits		
151118A-LCS	Lab Control Spike	70-130	93.4				
AZ24401-MS	Matrix Spike	70-130	93.4				
AZ24401-MSD	Matrix SpikeD	70-130	91.9				
151118A-BLK	Blank	70-130	92.9				
AZ24396	S67-SS50-0006	70-130	93.2				
AZ24397	S67-SS50-0006P	70-130	93.4				
AZ24398	S67-SB50-1618	70-130	94.3				
AZ24399	S67-SS51-0006	70-130	95.1				
AZ24400	S67-SS52-0006	70-130	93.8				
AZ24401	S67-SS53-0006	70-130	93.8				

Comments: Batch: #83BJU-151118A

Printed: 12/07/15 11:57:27 AM

Form 2 & 8, Surrogate Recovery Summary

Method Blank
EPA 8330B SOIL

Blank Name/QCG: **151118S-24401 - 202617**
 Batch ID: #83BJU-151118A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
BLANK	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
BLANK	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
BLANK	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/20/15
BLANK	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
BLANK	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/20/15
BLANK	SURROGATE: 1,2-DINITROBENZ	92.9	70-130			%	11/18/15	11/20/15

Quant Method: W150729.M
Run #: 1117_000142
Instrument: Waldorf
Sequence: 151117
Initials: MP

GC SC-Blank-REG MDLs-DOD
 Printed: 12/07/15 11:58:53 AM

Laboratory Control Spike Recovery
EPA 8330B SOIL

APPL ID: 151118S-24401 LCS - 202617

Batch ID: #83BJU-151118A

APPL Inc.

908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level	SPK Result	SPK %	Recovery
	mg/kg	mg/kg	Recovery	Limits
2,4-DINITROTOLUENE	1.96	1.77	90.3	80-125
2,6-DINITROTOLUENE	1.96	1.80	91.8	80-120
HMX	1.96	1.83	93.4	75-125
NITROGLYCERIN	1.96	1.71	87.2	68-131
RDX	1.96	1.74	88.8	70-135
TETRYL	1.96	1.63	83.2	10-150
SURROGATE: 1,2-DINITROBENZENE (S)	1.96	1.83	93.4	70-130

Comments: _____

Primary	SPK
Quant Method :	W150729.M
Extraction Date :	11/18/15
Analysis Date :	11/20/15
Instrument :	Waldorf
Run :	1117_000137
Initials :	MP

Printed: 12/07/15 11:57:18 AM
 APPL Standard LCS

Matrix Spike Recoveries
EPA 8330B SOIL

APPL ID: **151118S-24401 MS - 202617**

Batch ID: #83BJU-151118A

Sample ID: AZ24401

Client ID: S67-SS53-0006

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	SPK Lvl	DUP Lvl	Matrix	SPK	DUP	SPK %	DUP %	Recovery	RPD	RPD
	mg/kg	mg/kg	mg/kg	Result	Result	mg/kg	Recovery	Recovery	Limits	%	Limits
2,4-DINITROTOLUENE	1.98	1.97	ND	1.79	1.76	90.4	89.3	80-125	1.2	20
2,6-DINITROTOLUENE	1.98	1.97	ND	1.81	1.79	91.4	90.9	80-120	0.55	20
HMX	1.98	1.97	ND	1.83	1.78	92.4	90.4	75-125	2.2	20
NITROGLYCERIN	1.98	1.97	ND	1.83	1.77	92.4	89.8	68-131	2.9	20
RDX	1.98	1.97	ND	1.58	1.56	79.8	79.2	70-135	0.75	20
TETRYL	1.98	1.97	ND	1.62	1.60	81.8	81.2	10-150	0.74	20
SURROGATE: 1,2-DINITROBENZEN	1.98	1.97	NA	1.85	1.82	93.4	92.4	70-130		

Comments:

Primary	SPK	DUP
Quant Method :	W150729.M	W150729.M
Extraction Date :	11/18/15	11/18/15
Analysis Date :	11/20/15	11/20/15
Instrument :	Waldorf	Waldorf
Run :	1117_000138	1117_000139
Initials :	MP	

Printed: 12/07/15 11:57:14 AM

APPL MSD SCII

EPA 8330B

Form 4

Blank Summary

Lab Name: APPL, Inc.	SDG No: 77838
Case No: 77838	Date Analyzed: 11/20/15
Matrix: SOIL	Instrument: Waldorf
Blank ID: 151118A-BLK	Time Analyzed: 2036

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151118A-LCS	Lab Control Spike	1117_000137	11/20/15 1728
151118A-MS	Matrix Spike	1117_000138	11/20/15 1806
151118A-MSD	Matrix SpikeD	1117_000139	11/20/15 1843
151118A-BLK	Blank	1117_000142	11/20/15 2036
AZ24396	S67-SS50-0006	1117_000144	11/20/15 2151
AZ24397	S67-SS50-0006P	1117_000145	11/20/15 2228
AZ24398	S67-SB50-1618	1117_000146	11/20/15 2306
AZ24399	S67-SS51-0006	1117_000147	11/20/15 2343
AZ24400	S67-SS52-0006	1117_000148	11/21/15 0021
AZ24401	S67-SS53-0006	1117_000150	11/20/15 0126

Comments: Batch: #83BJU-151118A

Metals Analysis

Tetra Tech
 5700 Lake Wright Dr, Ste 309
 Norfolk, VA 23502

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Attn: Ed Corack
 Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006
 Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24396

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 15.9 Percent Moisture.)									
6010C/3050B	ALUMINUM (AL)	5970	1190.0	95.00	47.00	mg/Kg	20	11/23/15	11/24/15
6010C/3050B	BORON (B)	4.80 U	5.9	4.80	1.80	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	LITHIUM (LI)	5.0	0.80	0.590	0.300	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	ZINC (ZN)	24.6	9.5	4.80	1.40	mg/Kg	1	11/23/15	11/24/15

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006P
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24397

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 15.3 Percent Moisture.)									
6010C/3050B	ALUMINUM (AL)	7140	1180.0	94.00	47.00	mg/Kg	20	11/23/15	11/24/15
6010C/3050B	BORON (B)	4.70 U	5.9	4.70	1.80	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	LITHIUM (LI)	6.4	0.79	0.590	0.300	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	ZINC (ZN)	22.2	9.4	4.70	1.40	mg/Kg	1	11/23/15	11/24/15

Printed: 12/01/15 11:00:51 AM

?L-F1-SC-MCRes/MCPQL-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SB50-1618
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24398

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 21.2 Percent Moisture.)									
6010C/3050B	ALUMINUM (AL)	3320	63.0	5.10	2.50	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	BORON (B)	5.10 U	6.3	5.10	2.00	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	LITHIUM (LI)	1.8	0.85	0.630	0.320	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	ZINC (ZN)	35.5	10.0	5.10	1.50	mg/Kg	1	11/23/15	11/24/15

Printed: 12/01/15 11:00:52 AM

?L-F1-SC-MCRes/MCPQL-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS51-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24399

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 23.6 Percent Moisture.)									
6010C/3050B	ALUMINUM (AL)	13400	1310.0	105.00	52.00	mg/Kg	20	11/23/15	11/24/15
6010C/3050B	BORON (B)	5.20 U	6.5	5.20	2.00	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	LITHIUM (LI)	7.3	0.88	0.650	0.330	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	ZINC (ZN)	27.4	10.0	5.20	1.50	mg/Kg	1	11/23/15	11/24/15

Printed: 12/01/15 11:00:52 AM

?L-F1-SC-MCRes/MCPQL-REG MDLs

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS52-0006
Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24400

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 19.0 Percent Moisture.)									
6010C/3050B	ALUMINUM (AL)	7160	1230.0	99.00	49.00	mg/Kg	20	11/23/15	11/24/15
6010C/3050B	BORON (B)	4.90 U	6.2	4.90	1.90	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	LITHIUM (LI)	5.3	0.83	0.620	0.310	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	ZINC (ZN)	25.9	9.9	4.90	1.40	mg/Kg	1	11/23/15	11/24/15

Printed: 12/01/15 11:00:52 AM

?L-F1-SC-MCRes/MCPQL-REG MDLs

Metals Analysis

Tetra Tech
 5700 Lake Wright Dr, Ste 309
 Norfolk, VA 23502

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Attn: Ed Corack
 Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS53-0006
 Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24401

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 18.6 Percent Moisture.)									
6010C/3050B	ALUMINUM (AL)	10900	1230.0	98.00	49.00	mg/Kg	20	11/23/15	11/24/15
6010C/3050B	BORON (B)	26.2	6.1	4.90	1.90	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	LITHIUM (LI)	8.7	0.82	0.610	0.310	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	ZINC (ZN)	35.1	9.8	4.90	1.40	mg/Kg	1	11/23/15	11/24/15

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	ALUMINUM (AL)	4.00 U	50.0	4.00	1.98	mg/Kg	11/23/15	11/24/15	#61CJU-151123A-AZ24401
6010C	BORON (B)	4.00 U	5.0	4.00	1.55	mg/Kg	11/23/15	11/24/15	#61CJU-151123A-AZ24401
6010C	LITHIUM (LI)	0.500 U	0.67	0.500	0.250	mg/Kg	11/23/15	11/24/15	#61CJU-151123A-AZ24401
6010C	ZINC (ZN)	4.00 U	8.0	4.00	1.15	mg/Kg	11/23/15	11/24/15	#61CJU-151123A-AZ24401

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/Kg	SPK Result mg/Kg	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	ALUMINUM (AL)	200	187	93.5	80-120	11/23/15	11/24/15	#61CJU-151123A-AZ24401
EPA 6010C	BORON (B)	25.0	24.4	97.6	80-120	11/23/15	11/24/15	#61CJU-151123A-AZ24401
EPA 6010C	LITHIUM (LI)	10.00	11.0	110	80-120	11/23/15	11/24/15	#61CJU-151123A-AZ24401
EPA 6010C	ZINC (ZN)	50.0	52.8	106	80-120	11/23/15	11/24/15	#61CJU-151123A-AZ24401

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: 151123S-24401 MS - 202562

APPL Inc.

908 North Temperance Avenue

Sample ID: AZ24401

Clovis, CA 93611

Client ID: S67-SS53-0006

Method	Compound Name	Spike Lvl	Matrix Res	SPK Res	DUP Res	SPK %	DUP %	RPD	RPD Recovery	Extract	Analysis	Extract	Analysis	QC	QC	
		mg/Kg	mg/Kg	mg/Kg	mg/Kg	Recovery	Recovery	Max	Limits	Date-Spk	Date-Spk	Date-Dup	Date-Dup	Group	Sample	
EPA 6010C ALUMINUM (AL)		388	8900	9880	12100	253 #	825 #	20.2 #	20	80-120	11/23/15	11/24/15	11/23/15	11/24/15	202562	AZ24401
EPA 6010C BORON (B)		48.5	21.3	59.5	65.5	78.8 #	91.1	9.6	20	80-120	11/23/15	11/24/15	11/23/15	11/24/15	202562	AZ24401
EPA 6010C LITHIUM (LI)		19.4	7.1	29.0	30.7	113	122 #	5.7	20	80-120	11/23/15	11/24/15	11/23/15	11/24/15	202562	AZ24401
EPA 6010C ZINC (ZN)		97.1	28.6	107	111	80.7	84.9	3.7	20	80-120	11/23/15	11/24/15	11/23/15	11/24/15	202562	AZ24401

= Recovery is outside QC limits.

Comments: _____

6010C/3050B

Form 4

Blank Summary

Lab Name: APPL, Inc.
 Case No: 77838
 Matrix: SOIL
 Blank ID: 151123A-BLK

SDG No: 77838
 Date Analyzed: 11/24/15
 Instrument: Phoebe
 Time Analyzed: 1231

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151123A-MSD	Matrix SpikeD	151124A	11/24/15 1448
151123A-MS	Matrix Spike	151124A	11/24/15 1444
151123A-LCS	Lab Control Spike	151124A	11/24/15 1236
AZ24401	S67-SS53-0006	151124A	11/24/15 1316
AZ24400	S67-SS52-0006	151124A	11/24/15 1312
AZ24399	S67-SS51-0006	151124A	11/24/15 1308
AZ24397	S67-SS50-0006P	151124A	11/24/15 1259
AZ24396	S67-SS50-0006	151124A	11/24/15 1255
151123A-BLK	Blank	151124A	11/24/15 1231
AZ24401	S67-SS53-0006	151124A	11/24/15 1439
AZ24400	S67-SS52-0006	151124A	11/24/15 1435
AZ24399	S67-SS51-0006	151124A	11/24/15 1431
AZ24398	S67-SB50-1618	151124A	11/24/15 1426
AZ24397	S67-SS50-0006P	151124A	11/24/15 1422
AZ24396	S67-SS50-0006	151124A	11/24/15 1418

Comments: Batch: #61CJU-151123A



908 North Temperance Ave. ▼ Clovis, CA 93611 ▼ Phone 559-275-2175 ▼ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 74807

Data Validatable Report

December 7, 2015

Tetra Tech NUS, Inc.
5700 Lake Wright Drive, Suite 309
Norfolk, Virginia 23502

Attn: Ed Corack

Title: Report of Data: Case 77838

Project: CTO JU11 112G02622 NSF Indian Head, MD

Contract #: Prime contract # for DoD: Navy CLEAN. N62467-08-D-1001
Subcontract # 1045497, Work Release # 08-JU11

Dear Mr. Corack:

Six soil samples were received November 11, 2015, at 3.5°C. Written results for the requested analyses are being provided on this December 7, 2015.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Cynthia Clark, cclark@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Sharon Dehmlow, Laboratory Director
APPL, Inc.

SD/rp
Enclosure
cc: File

Number of pages in this report: 595

Data Validation Package
for
CTO JU11 112G02622 NSF Indian Head
ARF 77838

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Raw Data	<u>577</u>

SAMPLE RECEIPT INFORMATION

Sample receipt information

ARF: 77838

Project: CTO JU11 112G02622 NSF Indian Head, MD

Sample Receipt Information:

The soil samples were received on November 11, 2015, at 3.5°C. The samples were assigned Analytical Request Form (ARF) number 77838. The sample numbers and requested analyses were compared to the chains of custody and email communications. No exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
S67-SS50-0006	AZ24396	SOIL	11/09/15	11/11/15
S67-SS50-0006P	AZ24397	SOIL	11/09/15	11/11/15
S67-SB50-1618	AZ24398	SOIL	11/09/15	11/11/15
S67-SS51-0006	AZ24399	SOIL	11/09/15	11/11/15
S67-SS52-0006	AZ24400	SOIL	11/10/15	11/11/15
S67-SS53-0006	AZ24401	SOIL	11/10/15	11/11/15

Percent moisture was determined using ISM02.2, Exhibit D, section 10.0.

The samples and blanks were screened for J-value responses between the detection limit (DL) and limit of quantitation (LOQ).

Laboratory control limits generated in house do not meet the control limits listed in DoD QSM 4.2 for all analytes. Laboratory control limits generated for this project meet all control limits listed in the DoD QSM 4.2 except where noted. A copy of our in house generated control limits is available upon request. In addition, a copy of our LOQ control limits, established using 7 data points, are also available upon request.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

CASE NARRATIVE

EPA Method 8270D

Semi-Volatile Organic Compounds

Sample Preparation and Analysis Information:

The soil samples were extracted according to EPA method 3550B. All holding times were met.

The samples were analyzed according to EPA Method 8270D using an Agilent GC/MS.

Quality Control/Accurance

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS acceptance criteria were met.

Sample S67-SS53-0006 was designated by the client for MS/MSD analysis. All acceptance criteria were met.

Method blanks

No target metal was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Surrogates

Surrogate recoveries are summarized on Form 2 & 8. The surrogate 2-Fluorobiphenyl recovered below the 45% lower control limit in two samples: S67-SS50-0006 and S67-SS52-0006. The samples were re-injected with similar results. All other surrogate recoveries were acceptable.

Calibration

The initial and continuing calibrations were performed according to the method. All method acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All method criteria were met.

Summary:

No other problem was encountered. All data generated are acceptable.

EPA Method 8270D-SIM

Polynuclear Aromatic Hydrocarbons

Sample Preparation and Analysis Information:

The soil samples were extracted according to EPA method 3550B. All holding times were met.

The samples were analyzed according to EPA Method 8270D using an Agilent GC/MS with selective ion monitoring. The extract for sample S67-SS51-0006 was dark and viscous. The extract was diluted by a factor of 10 and the reporting limits were raised accordingly.

Manual integrations were performed in accordance with APPL's SOP. Benzo (b) fluoranthene and benzo (k) fluoranthene were manually integrated in two samples. Chromatograms of before and after manual integration are enclosed.

Quality Control/Accuracy

Spike Recovery

A Laboratory Control Spike (LCS) was used for quality assurance. All LCS acceptance criteria were met.

Sample S67-SS53-0006 was designated by the client for MS/MSD analysis. The RPDs for three analytes exceeded the 30% limit. All spike recoveries met acceptance criteria.

Method blanks

No target analyte was detected above one-half the limit of quantitation (LOQ) in the method blanks.

Surrogates

Surrogate recoveries are summarized on Form 2 & 8. Due to the dilution required by the matrix, the surrogates for sample S67-SS51-0006 are reported as "DO", diluted out. Nitrobenzene-D5 recovered above the 100% upper control limit at 101% in the MSD. All other surrogate recoveries were within control limits.

Calibration

The initial and continuing calibrations were performed according to the method. All method acceptance criteria were met.

Tuning:

The instrument was tuned using DFTPP. All method criteria were met.

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All method criteria were met.

Summary:

No other analytical problem was encountered. The data generated are acceptable.

EPA Method 6850

Perchlorate by LC-Mass Spec

Sample Preparation and Analysis Information:

The soil samples were prepared according to the method. The samples were analyzed according to EPA Method 6850 using an Agilent 6460 Triple Quad LC/MS. The samples were prepared and analyzed within acceptable hold time.

Manual integrations were performed in accordance to APPL's SOP. Perchlorate was manually integrated in two samples, MS/MSD and ICS. Chromatograms of before and after manual integration are enclosed.

Quality Control/Accuracy

Calibrations:

Calibrations were performed according to the method. All calibration acceptance criteria were met. The second source met acceptance criteria.

Blanks:

Perchlorate was not detected at or above one-half the limit of quantitation (LOQ) in the method blank.

Spikes:

Laboratory Control Spike (LCS) and Interference Check Sample (I.C.S.) were used for quality assurance. All LCS acceptance criteria were met..

The Interference Check Sample (I.C.S.) was prepared using a mixed anions solution. The ICS recovery met acceptance criteria.

Sample S67-SS53-0006 was designated by the client for MS/MSD analysis. Perchlorate recovered below the 80% lower control limit in the MS and MSD.

Internal Standards:

The area counts of the sample Internal Standards were compared to the average IS area counts of the initial calibration. All internal standards were within the 50%D acceptance criteria.

Summary:

No other analytical exception is noted. All data were acceptable.

EPA Method 8330B

Energetics

Sample Preparation:

The samples were dried and extracted according to EPA method 8330B, without using incremental sampling procedures. All holding times were met.

Analysis:

The samples were analyzed according to EPA Method 8330B using an Agilent 1290 HPLC with DA detector. Manual integrations were performed in accordance with APPL's SOP. The following analytes were manually integrated in the calibration standards: HMX, Nitroglycerin, PETN, and 3-Nitrotoluene. PETN was manually integrated in the LCS. Chromatograms of before and after manual integration are enclosed.

Quality Control/Assurance:

Spike Recovery:

A Laboratory Control Spike (LCS) was used for quality assurance. All spike acceptance criteria was met.

Sample S67-SS53-0006 was designated by the client for MS/MSD analysis. All acceptance criteria were met.

Method blanks:

No target analyte was detected at or above one-half the limit of quantitation (LOQ) in the method blank.

Surrogates:

Surrogate recoveries are summarized on the Form 2 & 8. All surrogates had acceptable recoveries.

Calibration:

The initial and continuing calibrations and second source were analyzed according to the method. All calibration criteria were met.

Summary:

No other analytical problem was encountered. The data generated are acceptable.

EPA Method 6010C

Metals

Digestion and Analysis Information:

The soil samples were digested according to EPA method 3050B. The samples were analyzed for metals according to EPA method 6010C using a Perkin Elmer Optima 5300DV. All holding times were met.

Quality Control/Accuracy:

Calibrations:

Calibrations were performed according to the methods for the initial calibration and the initial calibration verification. The initial calibration verification is prepared from a second source standard.

Blanks:

No target metal was detected above one half the LOQ in the method blank.

Spikes:

Laboratory Control Spike (LCS), Matrix Spikes (MS/MSD), Post-Digestion Spike (PDS), and a Dilution Test (DT) were used for quality assurance. All LCS acceptance criteria were met.

Sample S67-SS53-0006 was designated by the client for MS/MSD analysis. Three of the four metals recovered outside of the control limits in the MS and/or MSD. All acceptance criteria were met in the PDS and DT.

Summary:

No other analytical problem was encountered. The data generated are acceptable.

APPL Inc.
Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer.
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other – (See case narrative)
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel
U	Not detected
Y	Percent difference between primary and confirmation column > 40%

**CHAIN OF CUSTODY,
ARF, CRF, AND
CLIENT COMMUNICATION**

APPL - Analysis Request Form

77838

Client: Tetra Tech
 Address: 5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502
 Attn: Ed Corack
 Phone: 757-466-4908 Fax: 757-461-4148
 Job: CTO JU11 112G02622 NSF Indian Head
 PO #: MSA #1045497 Release #08-CTO JU11
 Chain of Custody (Y/N): Y # 42665
 RAD Screen (Y/N): Y pH (Y/N): N
 Turn Around Type: STD

Received by: RBP 
 Date Received: 11/11/15 Time: 10:30
 Delivered by: FEDEX
 Shuttle Custody Seals (Y/N): Y Time Zone: -5
 Chest Temp(s): 3.5 °C
 Color: B-RED
 Samples Chilled until Placed in Refrig/Freezer: Y
 Project Manager: Cynthia Clark
 QC Report Type: DVP4/LEDD/MD
 Due Date: 12/02/15

Comments:

login to ed.corack@ amy.thomson@ & tobrena.sedlmyer@tetrtech.com.

Rush results to Ed; 21 calendar day TAT for final report

1HC DVP4 and summary report & 2 BOOKMARKED CDs of DVP4 and

Summary report (sample & QC results w/surrogate & blank summaries) to Amy Thomson (Pittsburgh)

Include original COC with report. NOTHING to Ed in VA office

EDD: TTEC LEDD to http://lsg.applications.tetrtech.com/LEDDChecker2010/

EDD: email confirm to ed.corack@ amy.thomson@ & tobrena.sedlmyer@tetrtech.com

Guidance: DOD QSM v4.2: DOD Forms, LOD Database

Sample Distribution:

GC: 6-\$87DJU11S, 6-\$SIMDDODSM

**Extractions: 6- HPLC6850GROSS, 6- MSE018, 6-
SON009, 6- SON009S**

LCMS: 6-\$6850SM, 6-\$83BJU11S

Metals: 6-\$61CJU11S2(AI,B,LI,Zn)

Wetlab: 6-MOIST, 6-MOISTG

Other: 6- M3050

Charges:Invoice To:

ACCOUNTS PAYABLE

661 Andersen Dr, Foster Plaza 7

Pittsburgh, PA 15220-2745

invoice in triplicate per SOW

Client ID	APPL ID	Sampled	Analyses Requested
1. S67-SS50-0006	AZ24396S 	11/09/15 09:35	\$61CJU11S2(AI,B,LI,Zn), \$6850SM, \$83BJU11S, \$87DJU11S, \$SIMDDODSM, MOIST, MOISTG -- add Li Spike
2. S67-SS50-0006P	AZ24397S 	11/09/15 09:36	\$61CJU11S2(AI,B,LI,Zn), \$6850SM, \$83BJU11S, \$87DJU11S, \$SIMDDODSM, MOIST, MOISTG -- add Li Spike
3. S67-SB50-1618	AZ24398S 	11/09/15 09:50	\$61CJU11S2(AI,B,LI,Zn), \$6850SM, \$83BJU11S, \$87DJU11S, \$SIMDDODSM, MOIST, MOISTG -- add Li Spike

APPL - Analysis Request Form**77838**

4. S67-SS51-0006	AZ24399S	11/09/15 13:20	\$61CJU11S2(AI,B,Li,Zn), \$6850SM, \$83BJU11S, \$87DJU11S, \$SIMDDODSM, MOIST, MOISTG -- add Li Spike
5. S67-SS52-0006	AZ24400S	11/10/15 09:40	\$61CJU11S2(AI,B,Li,Zn), \$6850SM, \$83BJU11S, \$87DJU11S, \$SIMDDODSM, MOIST, MOISTG -- add Li Spike
6. S67-SS53-0006	AZ24401S MS/MSD	11/10/15 12:30	\$61CJU11S2(AI,B,Li,Zn), \$6850SM, \$83BJU11S, \$87DJU11S, \$SIMDDODSM, MOIST, MOISTG -- add Li Spike

APPL Sample Receipt Form

ARF# 77838

Sample	Container Type	Count	pH
AZ24396	21 8oz Jar	2	na
AZ24397	21 8oz Jar	1	na
AZ24398	21 8oz Jar	2	na
AZ24399	21 8oz Jar	2	na
AZ24400	21 8oz Jar	2	na
AZ24401	21 8oz Jar	3	na

Sample	Container Type	Count	pH
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APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

Report to: PLEASE PRINT

Company Name: Tetra Tech Phone: 757-466-4508
Address: 5700 Lake Wright Dr. Suite 309 Fax:
Norfolk, VA 23502
Attn: Ed Carack

Phone: (559) 275-2175
Fax: (559) 275-4422
C.O.C. 42665

77838 3.5

CHAIN OF CUSTODY RECORD

Invoice to: PLEASE PRINT

Company Name: See Phone:
Address: Contract Fax:
Attn:

Project Name/Number NSF-Indian Head Site 67 112602622	Sampler (Print) Jacob Birkett						Analysis Requested/Method Number						Date Shipped: 11-10-15
		Purchase Order Number	Matrix			Carrier: FedEx							
Sample Identification	Location	Date Collected 11-9-15	Time Collected 0935	Time Zone ET	No. of Containers 2	Aq	Sed.	Soil	Perforate	Select Metals	Select VOCs Solubles + PAHs	Select Energys	
S67-SS50-0006	S50/MW27	11-9-15	0935	ET	2		X		X	X X X X			
S67-SS50-0006P	S50/MW27	11-9-15	0936	ET	2		X		X	X X X X			
S67-SB50-1618	S50/MW27	11-9-15	0950	ET	2		X		X	X X X X			
S67-SB50-1618P	S50/MW27	11-9-15	0951	ET	2	JBB							11-9-15
S67-SS51-0006	S51/MW28	11-9-15	1320	ET	2		X		X	X X X X			
S67-SS52-0006	S52/MW29	11-10-15	0940	ET	2		X		X	X X X X			
S67-SS53-0006	S53/MW30	11-10-15	1230	ET	3		X		X	X X X X			Run MSMS/
		11-10-15											
Shuttle Temperature:	Turnaround Requested: Check one <input checked="" type="checkbox"/> Standard 2-3 wk <input type="checkbox"/> One week <input type="checkbox"/> 24/48 Hrs. <input type="checkbox"/> Other				Sample Disposal: <input type="checkbox"/> Return to client <input checked="" type="checkbox"/> Disposal by Lab (30-day retention)								
Relinquished by sampler: 	Date 11-10-15	Time 1700	Received by: FedEx	Relinquished by:		Date	Time	Received by:					
Relinquished by: 	Date	Time	Received by:	Relinquished by:		Date 11/10/15	Time 10:30	Received at lab by: Yang					

White: Return to client with report

Yellow: Laboratory Copy

Pink: Sampler

See reverse side for Container Preservative and Sampling Information

COOLER RECEIPT FORM

ARF: 77838

- 1) Project: CTO JU11 112G02622 NSF Indian Head Date Received: 11/11/15
- 2) Coolers: Number of Coolers: 1
- 3) YES Were custody seals present and intact? How many? 2 Name/Date on seal? see below
- 4) YES Was there a shipping slip? Carrier name: FEDEX
- 5) Type of packing in cooler: bubble wrap popcorn foam plastic bags
 wet ice dry ice no ice other
- 6) YES Were cooler temperatures acceptable?
- 7) Serial number of certified NIST thermometer use J5297
- 8) Cooler temp(s): In °C
 1: 3.5 2: _____ 3: _____ 4: _____ 5: _____ 6: _____
 7: _____ 8: _____ 9: _____ 10: _____ 11: _____ 12: _____

Chain of custody:

- 9) YES Was a chain of custody received?
 10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

- 11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?
 12) YES Did all container labels agree with custody papers?

Sample Containers:

- 13) YES Were all containers sealed in separate bags?
 14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?
 15) YES Were correct containers and preservatives used for the tests indicated?
 16) YES Was a sufficient amount of sample sent for tests indicated?
 17) NA Were bubbles present in volatile samples?
 If yes, the following were received with air bubbles:
 Larger than a pea: _____
 Smaller than a pea: _____

Preservation Hold time:

- 18) Yes Was a sufficient amount of holding time remaining to analyze the samples?
 19) NA Was the pH taken of all non-VOA preserved samples and written on the sample container?
 20) NA Was the pH of acid preserved non-VOA samples < 2?
 21) NA Was the pH of sodium hydroxide preserved samples for Cyanide > 12 and Sulfide >9?
 22) NO Were unpreserved VOA Vials received?
 23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
 pH strip lot number: _____
 Lab notified if pH was not adequate: _____

Notes/Deficiencies:

Personnel receiving samples: tx _____ Second reviewer: yl _____
 Personnel labeling samples: _____ Date/Time of notification _____
 Project manager notified: _____ Date/Time of notification _____
 Name of client notified: _____ Date/Time of notification _____

EPA METHOD 8270D
Semivolatile Organic Compounds

APPL, INC.

**EPA METHOD 8270D
Semivolatile Organic Compounds
QC Summary**

Method Blank
EPA 8270D SOILS

Blank Name/QCG: **151117S-24401 - 202360**
 Batch ID: #87DJU-151117A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BIS (2-ETHYLHEXYL) PHTHALATE	0.167 U	0.66	0.167	0.062	mg/kg	11/17/15	11/18/15
BLANK	BUTYL BENZYL PHTHALATE	0.167 U	0.33	0.167	0.056	mg/kg	11/17/15	11/18/15
BLANK	DI-N-BUTYL PHTHALATE	0.167 U	0.33	0.167	0.066	mg/kg	11/17/15	11/18/15
BLANK	DI-N-OCTYL PHTHALATE	0.167 U	0.33	0.167	0.058	mg/kg	11/17/15	11/18/15
BLANK	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	11/17/15	11/18/15
BLANK	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	11/17/15	11/18/15
BLANK	SURROGATE: 2,4,6-TRIBROMOP	75.2	35-125			%	11/17/15	11/18/15
BLANK	SURROGATE: 2-FLUORBIPHENY	66.3	45-105			%	11/17/15	11/18/15
BLANK	SURROGATE: 2-FLUOROPHENO	63.4	35-105			%	11/17/15	11/18/15
BLANK	SURROGATE: NITROBENZENE-	63.3	35-100			%	11/17/15	11/18/15
BLANK	SURROGATE: PHENOL (S)	70.1	40-100			%	11/17/15	11/18/15
BLANK	SURROGATE: TERPHENYL-D14 (	77.6	30-125			%	11/17/15	11/18/15

Quant Method: Y1117.M
Run #: 1117Y057
Instrument: Yoda
Sequence: Y151117
Initials: RP

GC SC-Blank-REG MDLs-DOD
 Printed: 11/25/15 3:03:26 PM

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc.

SDG No: 77838

Case No: 77838

Date Analyzed: 11/18/15

Matrix: SOIL

Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151117A-BLK	Blank	35-125	75.2		45-105	66.3	
151117A-LCS	Lab Control Spike	35-125	81.6		45-105	75.7	
AZ24396	S67-SS50-0006	35-125	59.5		45-105	40.8	#
AZ24397	S67-SS50-0006P	35-125	62.0		45-105	46.1	
AZ24398	S67-SB50-1618	35-125	72.7		45-105	61.1	
AZ24399	S67-SS51-0006	35-125	76.9		45-105	58.9	
AZ24400	S67-SS52-0006	35-125	49.3		45-105	33.3	#
AZ24401-MS	Matrix Spike	35-125	81.3		45-105	59.5	
AZ24401-MSD	Matrix SpikeD	35-125	78.4		45-105	62.8	
AZ24401	S67-SS53-0006	35-125	77.1		45-105	53.9	

Comments: Batch: #87DJU-151117A

= Recovery outside of Control Limits on Sample.

Printed: 11/25/15 3:03:10 PM

Form 2 & 8, Surrogate Recovery Summary

EPA 8270DForm 2 & 8**Surrogate Recovery**

Lab Name: APPL, Inc.

SDG No: 77838 .

Case No: 77838

Date Analyzed: 11/18/15

Matrix: SOIL

Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151117A-BLK	Blank	40-100	70.1		30-125	77.6	
151117A-LCS	Lab Control Spike	40-100	82.6		30-125	80.2	
AZ24396	S67-SS50-0006	40-100	79.0		30-125	67.2	
AZ24397	S67-SS50-0006P	40-100	80.7		30-125	63.0	
AZ24398	S67-SB50-1618	40-100	73.4		30-125	79.3	
AZ24399	S67-SS51-0006	40-100	75.6		30-125	71.6	
AZ24400	S67-SS52-0006	40-100	69.4		30-125	62.0	
AZ24401-MS	Matrix Spike	40-100	83.2		30-125	74.8	
AZ24401-MSD	Matrix SpikeD	40-100	75.4		30-125	70.0	
AZ24401	S67-SS53-0006	40-100	79.6		30-125	79.8	

Comments: Batch: #87DJU-151117A

Printed: 11/25/15 3:03:11 PM

Form 2 & 8, Surrogate Recovery Summary

EPA 8270DForm 2 & 8**Surrogate Recovery**

Lab Name: APPL, Inc.

SDG No: 77838

Case No: 77838

Date Analyzed: 11/18/15

Matrix: SOIL

Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151117A-BLK	Blank	35-105	63.4		35-100	63.3	
151117A-LCS	Lab Control Spike	35-105	78.4		35-100	77.8	
AZ24396	S67-SS50-0006	35-105	72.7		35-100	68.4	
AZ24397	S67-SS50-0006P	35-105	74.4		35-100	69.9	
AZ24398	S67-SB50-1618	35-105	69.5		35-100	71.1	
AZ24399	S67-SS51-0006	35-105	66.6		35-100	71.5	
AZ24400	S67-SS52-0006	35-105	63.0		35-100	61.0	
AZ24401-MS	Matrix Spike	35-105	78.3		35-100	79.6	
AZ24401-MSD	Matrix SpikeD	35-105	70.9		35-100	73.9	
AZ24401	S67-SS53-0006	35-105	73.6		35-100	75.6	

Comments: Batch: #87DJU-151117A

Printed: 11/25/15 3:03:11 PM

Form 2 & 8, Surrogate Recovery Summary

Laboratory Control Spike Recovery
EPA 8270D SOILS

APPL ID: **151117S-24401 LCS - 202360**

Batch ID: #87DJU-151117A

APPL Inc.

908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level	SPK Result	SPK % Recovery	Recovery Limits
	mg/kg	mg/kg	Recovery	Limits
BIS (2-ETHYLHEXYL) PHTHALATE	1.67	1.37	82.0	45-125
BUTYL BENZYL PHTHALATE	1.67	1.37	82.0	50-125
DI-N-BUTYL PHTHALATE	1.67	1.31	78.4	55-110
DI-N-OCTYL PHTHALATE	1.67	1.37	82.0	40-130
DIETHYL PHTHALATE	1.67	1.27	76.0	50-115
DIMETHYL PHTHALATE	1.67	1.26	75.4	50-110
SURROGATE: 2,4,6-TRIBROMOPHENOL	6.67	5.44	81.6	35-125
SURROGATE: 2-FLUORBIPHENYL (S)	3.33	2.52	75.7	45-105
SURROGATE: 2-FLUOROPHENOL (S)	6.67	5.23	78.4	35-105
SURROGATE: NITROBENZENE-D5 (S)	3.33	2.59	77.8	35-100
SURROGATE: PHENOL (S)	6.67	5.51	82.6	40-100
SURROGATE: TERPHENYL-D14 (S)	3.33	2.67	80.2	30-125

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	Y1117.M
Extraction Date :	11/17/15
Analysis Date :	11/18/15
Instrument :	Yoda
Run :	1117Y058
Initials :	RP

Printed: 11/25/15 3:03:20 PM

APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D SOILS

APPL ID: 151117S-24401 MS - 202360

Batch ID: #87DJU-151117A

Sample ID: AZ24401

Client ID: S67-SS53-0006

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Lvl	Matrix Result	SPK Result	DUP Result	SPK %	DUP %	Recovery	RPD	RPD
	mg/kg	mg/kg	mg/kg	mg/kg	Recovery	Recovery	Limits	%	Limits
BIS (2-ETHYLHEXYL) PHTHALATE	1.67	0.017	1.36	1.25	80.4	73.8	45-125	8.4	30
BUTYL BENZYL PHTHALATE	1.67	ND	1.33	1.25	79.6	74.9	50-125	6.2	30
DI-N-BUTYL PHTHALATE	1.67	ND	1.32	1.21	79.0	72.5	55-110	8.7	30
DI-N-OCTYL PHTHALATE	1.67	ND	1.38	1.26	82.6	75.4	40-130	9.1	30
DIETHYL PHTHALATE	1.67	ND	1.28	1.24	76.6	74.3	50-115	3.2	30
DIMETHYL PHTHALATE	1.67	ND	1.37	1.33	82.0	79.6	50-110	3.0	30
SURROGATE: 2,4,6-TRIBROMOPHENOL	6.67	NA	5.42	5.23	81.3	78.4	35-125		
SURROGATE: 2-FLUORBIPHENYL (S)	3.33	NA	1.98	2.09	59.5	62.8	45-105		
SURROGATE: 2-FLUOROPHENOL (S)	6.67	NA	5.22	4.73	78.3	70.9	35-105		
SURROGATE: NITROBENZENE-D5 (S)	3.33	NA	2.65	2.46	79.6	73.9	35-100		
SURROGATE: PHENOL (S)	6.67	NA	5.55	5.03	83.2	75.4	40-100		
SURROGATE: TERPHENYL-D14 (S)	3.33	NA	2.49	2.33	74.8	70.0	30-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	Y1117.M	Y1117.M
Extraction Date :	11/17/15	11/17/15
Analysis Date :	11/18/15	11/18/15
Instrument :	Yoda	Yoda
Run :	1117Y064	1117Y065
Initials :		RP

Printed: 11/25/15 3:03:14 PM
APPL MSD SCII

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc.

SDG No: 77838

Case No: 77838

Date Analyzed: 11/18/15

Matrix: SOIL

Instrument: Yoda

Blank ID: 151117A-BLK

Time Analyzed: 1738

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151117A-BLK	Blank	1117Y057	11/18/15 1738
151117A-LCS	Lab Control Spike	1117Y058	11/18/15 1807
AZ24396	S67-SS50-0006	1117Y059	11/18/15 1836
AZ24397	S67-SS50-0006P	1117Y060	11/18/15 1905
AZ24398	S67-SB50-1618	1117Y061	11/18/15 1934
AZ24399	S67-SS51-0006	1117Y062	11/18/15 2003
AZ24400	S67-SS52-0006	1117Y063	11/18/15 2031
151117A-MS	Matrix Spike	1117Y064	11/18/15 2100
151117A-MSD	Matrix SpikeD	1117Y065	11/18/15 2129
AZ24401	S67-SS53-0006	1117Y066	11/18/15 2158

Comments: Batch: #87DJU-151117A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 77838
Matrix: Soil
ID: SV Tune 11/16/15

SDG No: 77838
Date Analyzed: 11/17/15
Instrument: Yoda
Time Analyzed: 11:52

Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	5ug/ml SVOC 11/06/15	1117Y003.D	11/17/15 12:36
2	10ug/ml SVOC 11/06/1	1117Y004.D	11/17/15 13:04
3	20ug/ml SVOC 11/06/1	1117Y005.D	11/17/15 13:34
4	40ug/ml SVOC 11/06/1	1117Y006.D	11/17/15 14:03
5	50ug/ml SVOC 11/06/1	1117Y007.D	11/17/15 14:32
6	60ug/ml SVOC 11/06/1	1117Y008.D	11/17/15 15:01
7	80ug/ml SVOC 11/06/1	1117Y009.D	11/17/15 15:30
8	100ug/ml SVOC 11/06/	1117Y010.D	11/17/15 16:00
9	50ug/ml SVOC (SS STD)	1117Y011.D	11/17/15 16:29
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			

m/e

51	29.95 - 60.04% of mass 198	32.0
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	47.5
197	0 - 1.4% of mass 198	0.2
198	100 - 100% of mass 197.9	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	27.3
365	1 - 100% of mass 198	3.0
441	0.01 - 100% of mass 443	79.5
442	50 - 150% of mass 197.9	93.8
443	17 - 23% of mass 442	19.3

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 77838
Matrix: Soil
ID: SV TUNE 11/16/15

SDG No: 77838
Date Analyzed: 11/18/15
Instrument: Yoda
Time Analyzed: 13:55

Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	CCV: 50ug/ml SVOC 11	1117Y050.D	11/18/15 14:12
2	Blank	151117A BLK 1/30.01G	11/18/15 17:38
3	Lab Control Spike	151117A LCS-1 1/30.1	11/18/15 18:07
4	S67-SS50-0006	AZ24396S02 1/30.43G	11/18/15 18:36
5	S67-SS50-0006P	AZ24397S01 1/30.26G	11/18/15 19:05
6	S67-SB50-1618	AZ24398S02 1/30.21G	11/18/15 19:34
7	S67-SS51-0006	AZ24399S02 1/30.72G	11/18/15 20:03
8	S67-SS52-0006	AZ24400S02 1/30.66G	11/18/15 20:31
9		AZ24401S03 MS-1 1/30	11/18/15 21:00
10		AZ24401S03 MSD-1 1/3	11/18/15 21:29
11	S67-SS53-0006	AZ24401S03 1/30.96G	11/18/15 21:58
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			

m/e

51	29.95 - 60.04% of mass 198	35.1
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.4
127	40 - 60% of mass 198	48.9
197	0 - 1.4% of mass 198	0.0
198	100 - 100% of mass 197.9	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	27.8
365	1 - 100% of mass 198	3.3
441	0.01 - 100% of mass 443	73.8
442	50 - 150% of mass 197.9	96.5
443	17 - 23% of mass 442	19.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: 77838
 Lab Code: SDG No.: 77838
 Lab File ID (Standard): 1117Y007.D Date Analyzed: 11/17/15
 Instrument ID: Yoda Time Analyzed: 14:32
 GC Column: ID: Heated Purge: (Y/N)

	1,4-dichlorobenzene-D4(IS)		Naphthalene-D8(IS)		Acenaphthene-D10(IS)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	382841	5.16	1669020	6.60	926811	8.62
UPPER LIMIT	765682	5.66	3338040	7.10	1853622	9.12
LOWER LIMIT	191421	4.66	834510	6.10	463406	8.12
SAMPLE NO.						
01 5ug/ml SVOC 11/06/15	365688	5.16	1555050	6.60	856374	8.62
02 10ug/ml SVOC 11/06/15	375041	5.16	1654350	6.60	924256	8.62
03 20ug/ml SVOC 11/06/15	361734	5.16	1584880	6.60	894675	8.62
04 40ug/ml SVOC 11/06/15	385809	5.16	1642890	6.60	924636	8.62
05 50ug/ml SVOC 11/06/15	382841	5.16	1669020	6.60	926811	8.62
06 60ug/ml SVOC 11/06/15	373904	5.16	1641170	6.60	931230	8.62
07 80ug/ml SVOC 11/06/15	383989	5.17	1648580	6.60	926686	8.62
08 100ug/ml SVOC 11/06/1	382072	5.16	1650650	6.60	925207	8.62
09 50ug/ml SVOC (SS STD)	379945	5.16	1645930	6.60	915211	8.62
10 CCV: 50ug/ml SVOC 11	415768	5.16	1771820	6.60	989947	8.62
11 151117A BLK 1/30.01G	434935	5.16	1971940	6.60	1102950	8.62
12 151117A LCS-1 1/30.10	434162	5.16	1924120	6.59	1108960	8.62
13 AZ24396S02 1/30.43G	396312	5.16	1785510	6.59	992298	8.62
14 AZ24397S01 1/30.26G	412452	5.16	1853540	6.59	1015610	8.62
15 AZ24398S02 1/30.21G	432875	5.16	1854290	6.59	1039120	8.61
16 AZ24399S02 1/30.72G	450582	5.16	1943120	6.59	1099820	8.62
17 AZ24400S02 1/30.66G	425848	5.16	1855970	6.59	1019060	8.62
18 AZ24401S03 MS-1 1/30	442482	5.16	1926460	6.59	1086390	8.62
19 AZ24401S03 MSD-1 1/3	449817	5.16	1932490	6.60	1063420	8.62
20 AZ24401S03 1/30.96G	433851	5.16	1888970	6.59	1037620	8.61
21						
22						

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = -50% of internal standard area.

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: 77838
 Lab Code: SDG No.: 77838
 Lab File ID (Standard): 1117Y007.D Date Analyzed: 11/17/15
 Instrument ID: Yoda Time Analyzed: 14:32
 GC Column: ID: Heated Purge: (Y/N)

	Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1710980	10.36	1559670	13.45	923240	15.20
UPPER LIMIT	3421960	10.86	3119340	13.95	1846480	15.70
LOWER LIMIT	855490	9.86	779835	12.95	461620	14.70
SAMPLE NO.						
01 5ug/ml SVOC 11/06/15	1584040	10.36	1450390	13.45	856589	15.20
02 10ug/ml SVOC 11/06/15	1734020	10.36	1553910	13.45	930495	15.19
03 20ug/ml SVOC 11/06/15	1654800	10.36	1496400	13.45	893896	15.19
04 40ug/ml SVOC 11/06/15	1696330	10.36	1528340	13.45	916052	15.20
05 50ug/ml SVOC 11/06/15	1710980	10.36	1559670	13.45	923240	15.20
06 60ug/ml SVOC 11/06/15	1724150	10.36	1561610	13.46	925624	15.20
07 80ug/ml SVOC 11/06/15	1704300	10.36	1577850	13.46	930599	15.20
08 100ug/ml SVOC 11/06/1	1687210	10.36	1592160	13.46	921348	15.21
09 50ug/ml SVOC (SS STD	1712320	10.36	1552740	13.45	913721	15.20
10 CCV: 50ug/ml SVOC 11	1840520	10.35	1656940	13.45	969407	15.20
11 151117A BLK 1/30.01G	2077950	10.36	1815560	13.44	1060320	15.18
12 151117A LCS-1 1/30.10	2033150	10.35	1817500	13.45	1074490	15.20
13 AZ24396S02 1/30.43G	1821390	10.35	1601080	13.44	972336	15.19
14 AZ24397S01 1/30.26G	1875110	10.35	1657440	13.45	986615	15.18
15 AZ24398S02 1/30.21G	1949660	10.35	1709730	13.44	1009300	15.19
16 AZ24399S02 1/30.72G	2020550	10.35	1779810	13.44	1020720	15.19
17 AZ24400S02 1/30.66G	1914450	10.35	1686100	13.44	991244	15.19
18 AZ24401S03 MS-1 1/30	1979270	10.35	1810890	13.45	1040060	15.20
19 AZ24401S03 MSD-1 1/3	1979880	10.36	1766350	13.45	1026410	15.19
20 AZ24401S03 1/30.96G	1895280	10.35	1673160	13.44	985151	15.19
21						
22						

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = -50% of internal standard area.

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

EPA METHOD 8270D
Semivolatile Organic Compounds
Sample Data

APPL, INC.

EPA 8270D SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24396
QCG: #87DJU-151117A-202360

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 15.9 Percent Moisture.)								
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	0.200 U	0.78	0.200	0.074	mg/kg	11/17/15	11/18/15
EPA 8270D	BUTYL BENZYL PHTHALATE	0.200 U	0.39	0.200	0.067	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-BUTYL PHTHALATE	0.200 U	0.39	0.200	0.078	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-OCTYL PHTHALATE	0.200 U	0.39	0.200	0.069	mg/kg	11/17/15	11/18/15
EPA 8270D	DIETHYL PHTHALATE	0.200 U	0.39	0.200	0.074	mg/kg	11/17/15	11/18/15
EPA 8270D	DIMETHYL PHTHALATE	0.200 U	0.39	0.200	0.075	mg/kg	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	59.5	35-125			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	40.8 #	45-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	72.7	35-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	68.4	35-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: PHENOL (S)	79.0	40-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	67.2	30-125			%	11/17/15	11/18/15

= Recovery (or RPD) is outside QC limits.

Quant Method: Y1117.M
Run #: 1117Y059
Instrument: Yoda
Sequence: Y151117
Dilution Factor: 1
Initials: RP

Printed: 11/25/15 3:03:29 PM
PPL-F1-SC-MCRes/MCPQL-REG MDLs-DO

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y059.D Vial: 59
 Acq On : 18 Nov 15 18:36 Operator: MA
 Sample : AZ24396S02 1/30.43G Inst : Yoda
 Misc : soil Multiplr: 32.86

Quant Time: Nov 19 7:50 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	396312	40.00000	ppb	0.00
20) Naphthalene-D8 (IS)	6.59	136	1785511	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	992298	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.35	188	1821387	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.44	240	1601082	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.19	264	972336	40.00000	ppb	-0.02

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.64	112	1949151	4779.24211	ppb	0.00
Spiked Amount	6572.461		Recovery	=	72.716%	
5) Phenol-D6 (S)	4.77	99	2658908	5194.01673	ppb	0.00
Spiked Amount	6572.461		Recovery	=	79.027%	
21) Nitrobenzene-D5 (S)	5.78	82	1069123	2246.16964	ppb	0.00
Spiked Amount	3286.231		Recovery	=	68.351%	
45) 2-Fluorobiphenyl (S)	7.83	172	1331141	1341.63020	ppb	0.00
Spiked Amount	3286.231		Recovery	=	40.826%	
63) 2,4,6-Tribromophenol (S)	9.54	330	471488	3912.23805	ppb	0.00
Spiked Amount	6572.461		Recovery	=	59.525%	
81) Terphenyl-D14 (S)	12.22	244	2614064	2207.31608	ppb	0.00
Spiked Amount	3286.231		Recovery	=	67.169%	

Target Compounds

Qvalue

Quantitation Report

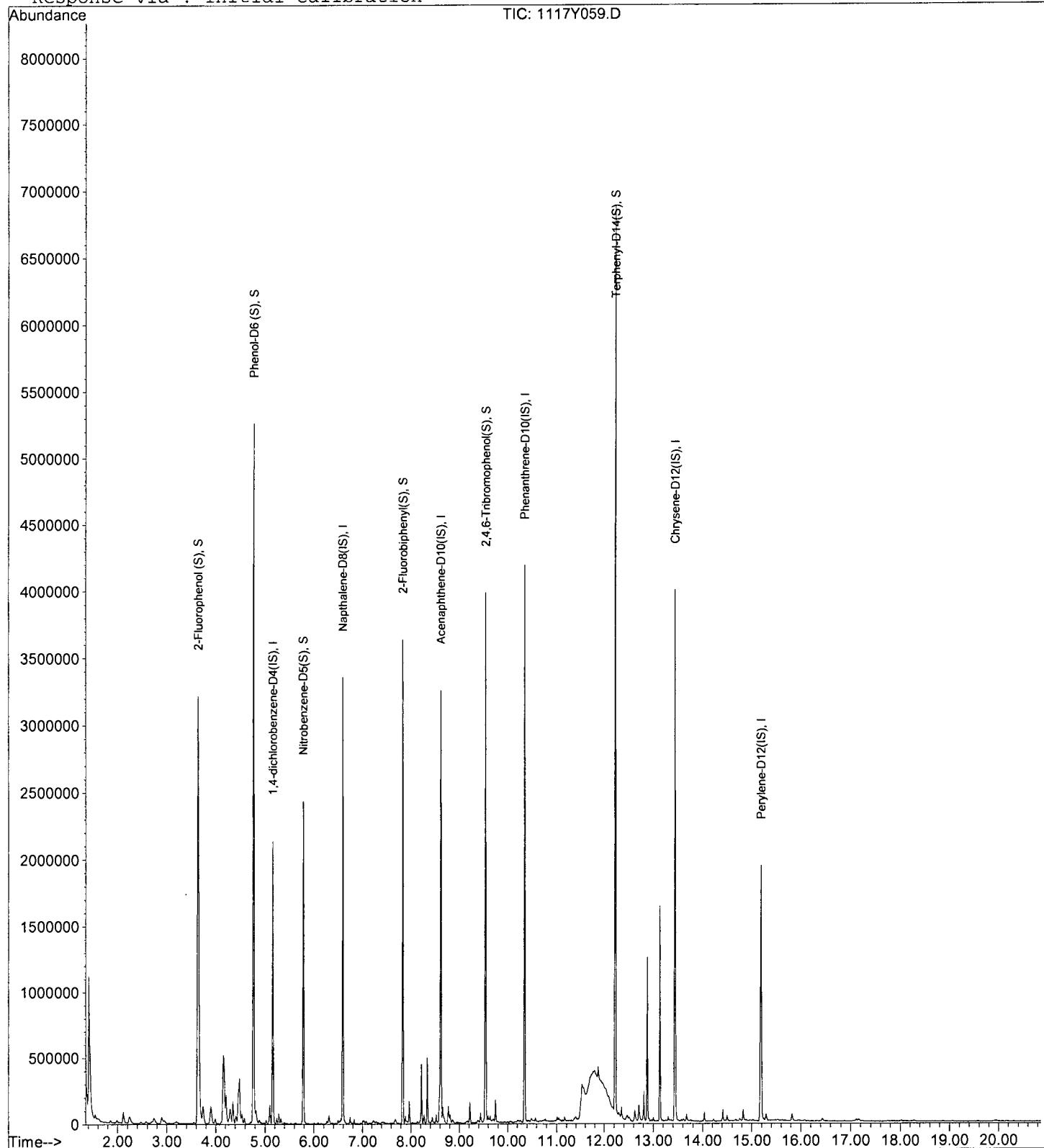
Data File : M:\YODA\DATA\Y151117\1117Y059.D
 Acq On : 18 Nov 15 18:36
 Sample : AZ24396S02 1/30.43G
 Misc : soil

Vial: 59
 Operator: MA
 Inst : Yoda
 Multiplr: 32.86

Quant Time: Nov 19 7:50 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



EPA 8270D SOILS

Tetra Tech
 5700 Lake Wright Dr, Ste 309
 Norfolk, VA 23502

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Attn: Ed Corack
 Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006P
 Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24397
 QCG: #87DJU-151117A-202360

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 15.3 Percent Moisture.)								
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	0.200 U	0.78	0.200	0.073	mg/kg	11/17/15	11/18/15
EPA 8270D	BUTYL BENZYL PHTHALATE	0.200 U	0.39	0.200	0.066	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-BUTYL PHTHALATE	0.200 U	0.39	0.200	0.078	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-OCTYL PHTHALATE	0.200 U	0.39	0.200	0.068	mg/kg	11/17/15	11/18/15
EPA 8270D	DIETHYL PHTHALATE	0.200 U	0.39	0.200	0.073	mg/kg	11/17/15	11/18/15
EPA 8270D	DIMETHYL PHTHALATE	0.200 U	0.39	0.200	0.074	mg/kg	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	62.0	35-125			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	46.1	45-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	74.4	35-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	69.9	35-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: PHENOL (S)	80.7	40-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	63.0	30-125			%	11/17/15	11/18/15

Quant Method: Y1117.M
 Run #: 1117Y060
 Instrument: Yoda
 Sequence: Y151117
 Dilution Factor: 1
 Initials: RP

Printed: 11/25/15 3:03:29 PM
 PPL-F1-SC-MCRes/MCPQL-REG MDLs-DO

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y060.D Vial: 60
 Acq On : 18 Nov 15 19:05 Operator: MA
 Sample : AZ24397S01 1/30.26G Inst : Yoda
 Misc : soil Multiplr: 33.05

Quant Time: Nov 19 7:50 2015 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	412452	40.00000	ppb	0.00
20) Napthalene-D8 (IS)	6.59	136	1853541	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	1015614	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.35	188	1875109	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.45	240	1657443	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.18	264	986615	40.00000	ppb	-0.02

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.64	112	2074657	4915.37542	ppb	0.00
Spiked Amount	6609.385		Recovery	=	74.370%	
5) Phenol-D6 (S)	4.77	99	2826525	5335.18773	ppb	0.00
Spiked Amount	6609.385		Recovery	=	80.721%	
21) Nitrobenzene-D5 (S)	5.79	82	1134391	2308.71869	ppb	0.00
Spiked Amount	3304.693		Recovery	=	69.862%	
45) 2-Fluorobiphenyl (S)	7.84	172	1539435	1524.46195	ppb	0.00
Spiked Amount	3304.693		Recovery	=	46.130%	
63) 2,4,6-Tribromophenol (S)	9.54	330	502880	4099.82635	ppb	0.00
Spiked Amount	6609.385		Recovery	=	62.030%	
81) Terphenyl-D14 (S)	12.22	244	2539894	2083.39639	ppb	0.00
Spiked Amount	3304.693		Recovery	=	63.044%	

Target Compounds Qvalue

Quantitation Report

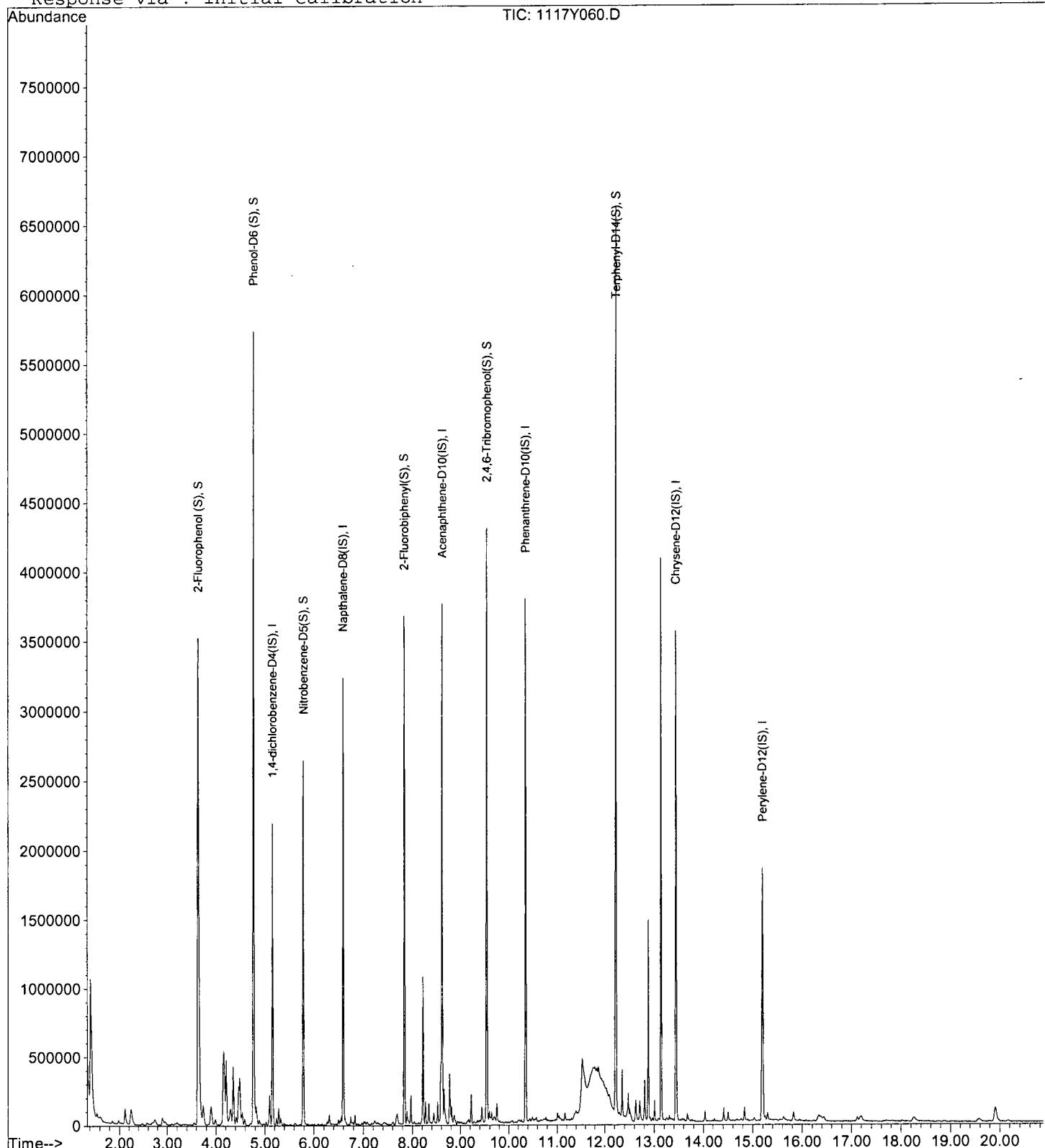
Data File : M:\YODA\DATA\Y151117\1117Y060.D
 Acq On : 18 Nov 15 19:05
 Sample : AZ24397S01 1/30.26G
 Misc : soil

Vial: 60
 Operator: MA
 Inst : Yoda
 Multiplr: 33.05

Quant Time: Nov 19 7:50 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



EPA 8270D SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SB50-1618
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24398
QCG: #87DJU-151117A-202360

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 21.2 Percent Moisture.)								
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	0.210 U	0.84	0.210	0.079	mg/kg	11/17/15	11/18/15
EPA 8270D	BUTYL BENZYL PHTHALATE	0.210 U	0.42	0.210	0.071	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-BUTYL PHTHALATE	0.210 U	0.42	0.210	0.084	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-OCTYL PHTHALATE	0.210 U	0.42	0.210	0.074	mg/kg	11/17/15	11/18/15
EPA 8270D	DIETHYL PHTHALATE	0.210 U	0.42	0.210	0.079	mg/kg	11/17/15	11/18/15
EPA 8270D	DIMETHYL PHTHALATE	0.210 U	0.42	0.210	0.080	mg/kg	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	72.7	35-125			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	61.1	45-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	69.5	35-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	71.1	35-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: PHENOL (S)	73.4	40-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	79.3	30-125			%	11/17/15	11/18/15

Quant Method: Y1117.M
Run #: 1117Y061
Instrument: Yoda
Sequence: Y151117
Dilution Factor: 1
Initials: RP

Printed: 11/25/15 3:03:29 PM

PPL-F1-SC-MCRes/MCPQL-REG MDLs-DOI

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y061.D Vial: 61
 Acq On : 18 Nov 15 19:34 Operator: MA
 Sample : AZ24398S02 1/30.21G Inst : Yoda
 Misc : soil Multiplr: 33.10

Quant Time: Nov 19 7:51 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	432875	40.00000	ppb	0.00
20) Naphthalene-D8 (IS)	6.59	136	1854286	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.61	164	1039120	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.35	188	1949661	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.44	240	1709733	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.19	264	1009303	40.00000	ppb	-0.02

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.64	112	2033688	4598.58005	ppb	0.00
Spiked Amount	6620.324		Recovery	=	69.462%	
5) Phenol-D6 (S)	4.77	99	2697383	4859.24200	ppb	0.00
Spiked Amount	6620.324		Recovery	=	73.399%	
21) Nitrobenzene-D5 (S)	5.78	82	1155196	2354.00580	ppb	0.00
Spiked Amount	3310.162		Recovery	=	71.115%	
45) 2-Fluorobiphenyl (S)	7.83	172	2085744	2022.07538	ppb	0.00
Spiked Amount	3310.162		Recovery	=	61.087%	
63) 2,4,6-Tribromophenol (S)	9.54	330	602881	4811.86904	ppb	0.00
Spiked Amount	6620.324		Recovery	=	72.683%	
81) Terphenyl-D14 (S)	12.22	244	3294270	2623.87984	ppb	0.00
Spiked Amount	3310.162		Recovery	=	79.267%	

Target Compounds

Qvalue

Quantitation Report

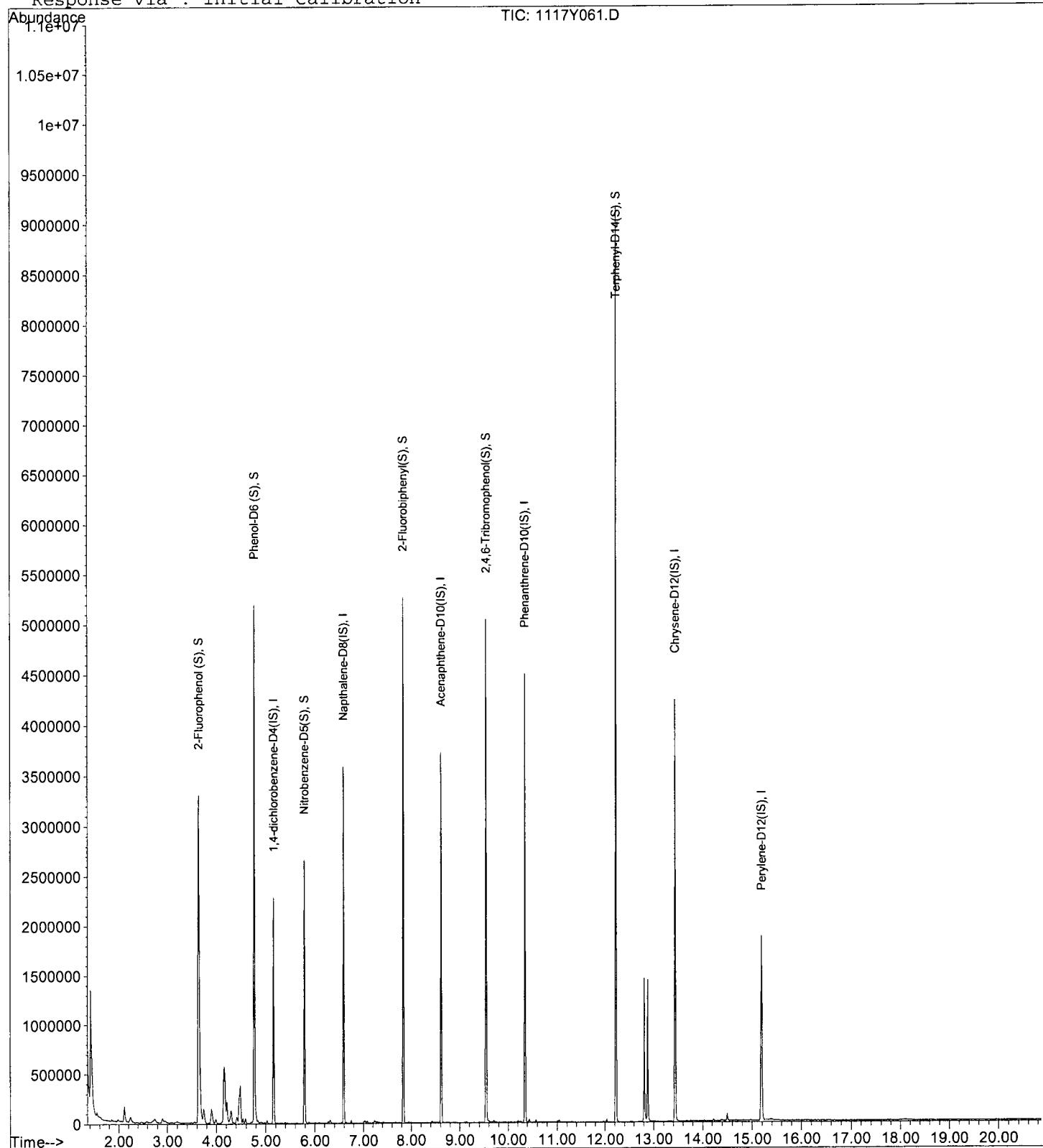
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 Acq On : 18 Nov 15 19:34
 Sample : AZ24398S02 1/30.21G
 Misc : soil

Vial: 61
 Operator: MA
 Inst : Yoda
 Multiplr: 33.10

Quant Time: Nov 19 7:51 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



EPA 8270D SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS51-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24399
QCG: #87DJU-151117A-202360

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 23.6 Percent Moisture.)								
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	0.220 U	0.86	0.220	0.081	mg/kg	11/17/15	11/18/15
EPA 8270D	BUTYL BENZYL PHTHALATE	0.220 U	0.43	0.220	0.073	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-BUTYL PHTHALATE	0.220 U	0.43	0.220	0.086	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-OCTYL PHTHALATE	0.220 U	0.43	0.220	0.076	mg/kg	11/17/15	11/18/15
EPA 8270D	DIETHYL PHTHALATE	0.220 U	0.43	0.220	0.081	mg/kg	11/17/15	11/18/15
EPA 8270D	DIMETHYL PHTHALATE	0.220 U	0.43	0.220	0.082	mg/kg	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	76.9	35-125			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	58.9	45-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	66.6	35-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	71.5	35-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: PHENOL (S)	75.6	40-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	71.6	30-125			%	11/17/15	11/18/15

Quant Method: Y1117.M
Run #: 1117Y062
Instrument: Yoda
Sequence: Y151117
Dilution Factor: 1
Initials: RP

Printed: 11/25/15 3:03:29 PM
PPL-F1-SC-MCRes/MCPQL-REG MDLs-DO

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y062.D Vial: 62
 Acq On : 18 Nov 15 20:03 Operator: MA
 Sample : AZ24399S02 1/30.72G Inst : Yoda
 Misc : soil Multiplr: 32.55

Quant Time: Nov 19 7:53 2015 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	450582	40.00000	ppb	0.00
20) Napthalene-D8 (IS)	6.59	136	1943121	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	1099817	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.35	188	2020546	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.44	240	1779811	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.19	264	1020716	40.00000	ppb	-0.02

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.64	112	2028700	4333.86537	ppb	0.00
Spiked Amount	6510.417			Recovery	= 66.568%	
5) Phenol-D6 (S)	4.77	99	2892428	4922.73696	ppb	0.00
Spiked Amount	6510.417			Recovery	= 75.613%	
21) Nitrobenzene-D5 (S)	5.78	82	1217940	2329.07844	ppb	0.00
Spiked Amount	3255.208			Recovery	= 71.549%	
45) 2-Fluorobiphenyl (S)	7.83	172	2127106	1916.02090	ppb	0.00
Spiked Amount	3255.208			Recovery	= 58.860%	
63) 2,4,6-Tribromophenol (S)	9.54	330	675261	5007.58858	ppb	0.00
Spiked Amount	6510.417			Recovery	= 76.917%	
81) Terphenyl-D14 (S)	12.22	244	3097271	2330.49331	ppb	0.00
Spiked Amount	3255.208			Recovery	= 71.593%	

Target Compounds

					Qvalue
26) Benzoic acid	6.30	105	34933	250.13875	ppb
73) Phenanthrene	10.38	178	62429	34.54430	ppb
77) Fluoranthene	11.77	202	123897	66.54726	ppb
80) Pyrene	12.03	202	84087	44.70114	ppb
85) Bis (2-ethylhexyl) phthala	13.46	149	24546	20.15310	ppb
86) Chrysene	13.47	228	68766	40.09939	ppb
89) Benzo (b) fluoranthene	14.67	252	57236	35.23045	ppb

Quantitation Report

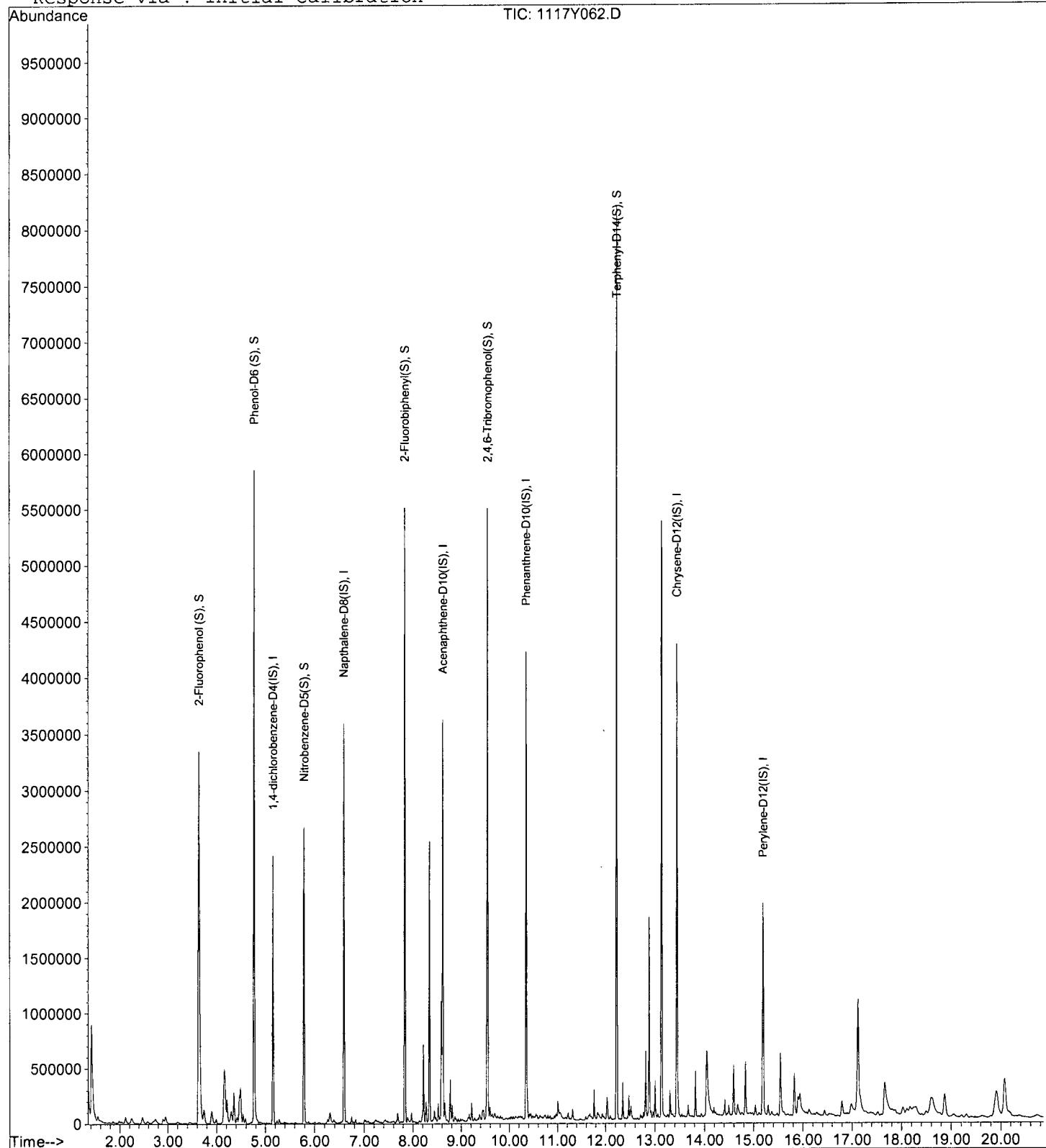
Data File : M:\YODA\DATA\Y151117\1117Y062.D
 Acq On : 18 Nov 15 20:03
 Sample : AZ24399S02 1/30.72G
 Misc : soil

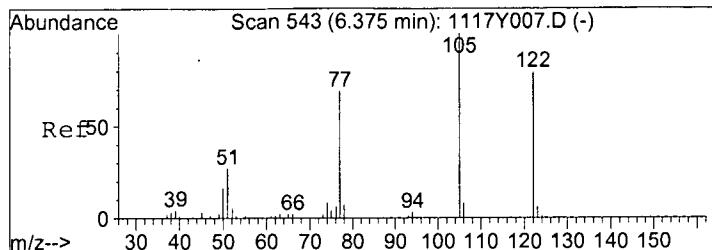
Vial: 62
 Operator: MA
 Inst : Yoda
 Multiplr: 32.55

Quant Time: Nov 19 7:53 2015

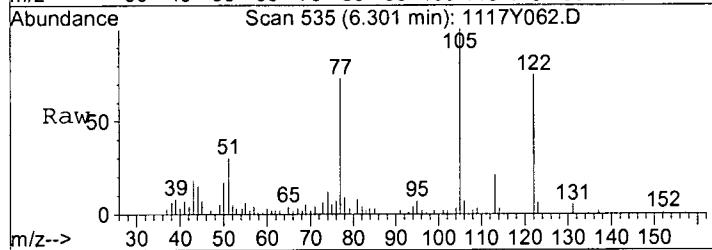
Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration

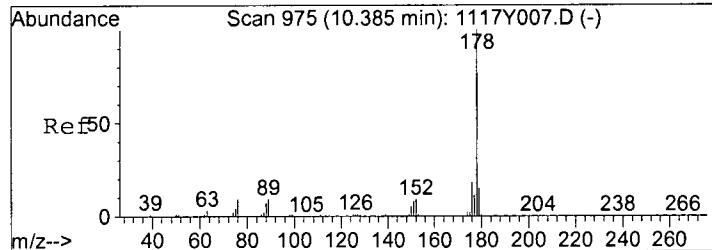
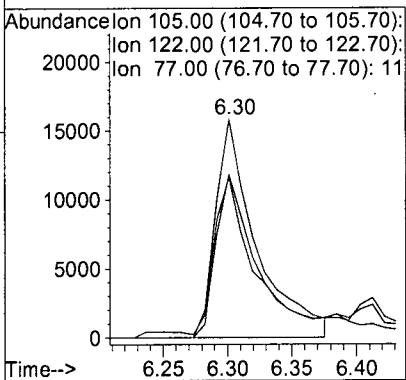
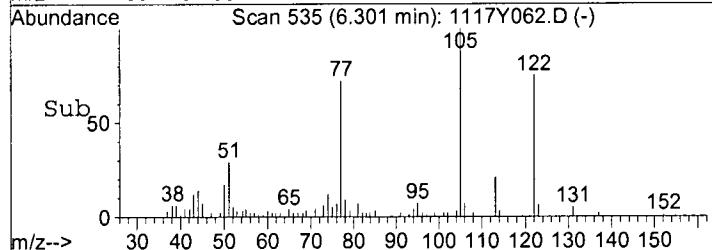




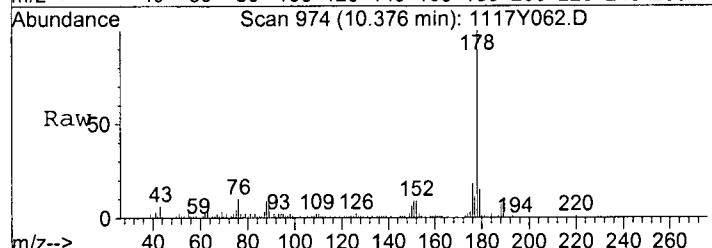
#26
Benzoic acid
Concen: 250.13875 ppb
RT: 6.30 min Scan# 535
Delta R.T. -0.07 min
Lab File: 1117Y062.D
Acq: 18 Nov 15 20:03



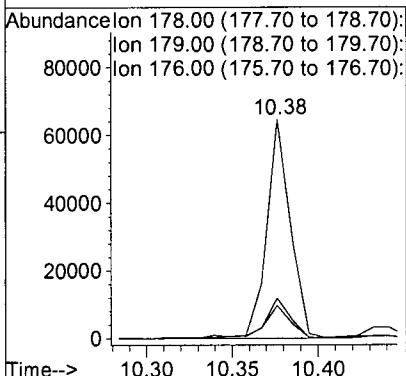
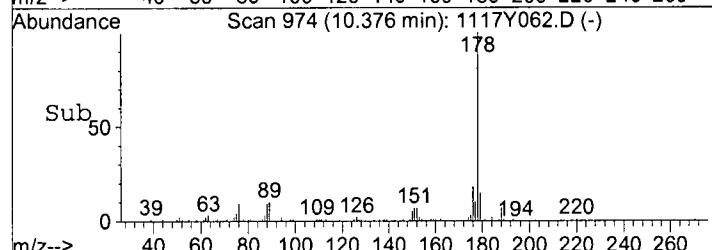
Tgt Ion: 105 Resp: 34933
Ion Ratio Lower Upper
105 100
122 74.8 55.0 102.2
77 70.8 48.3 89.7

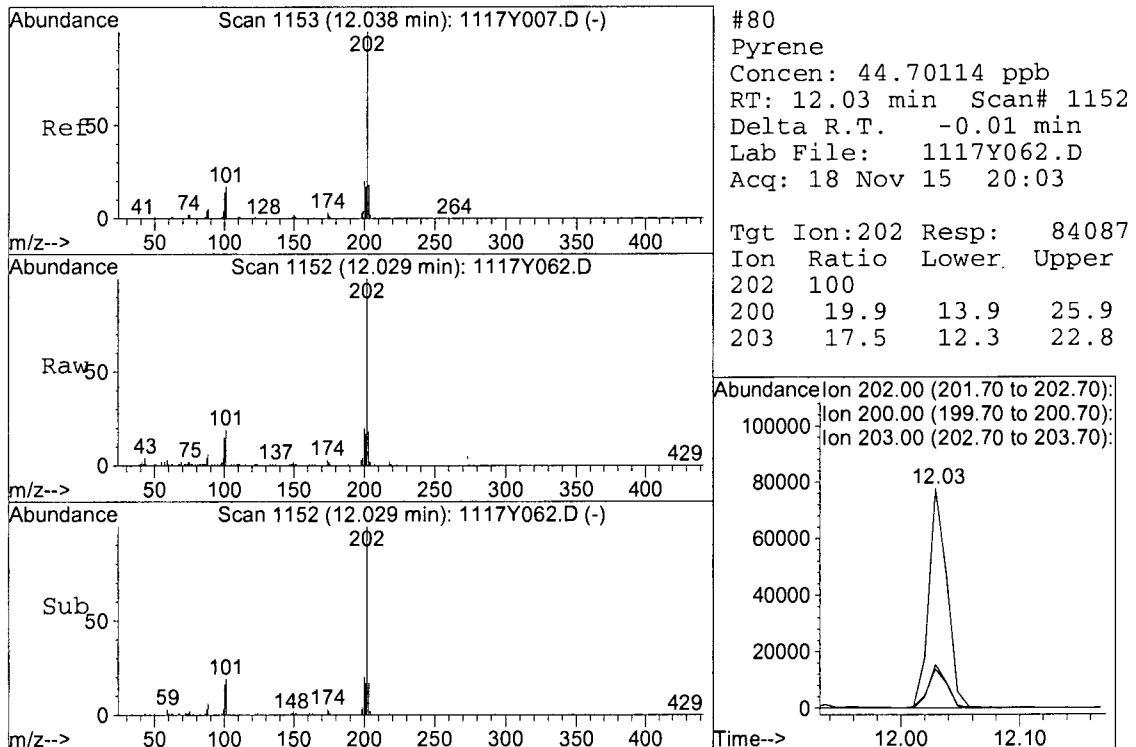
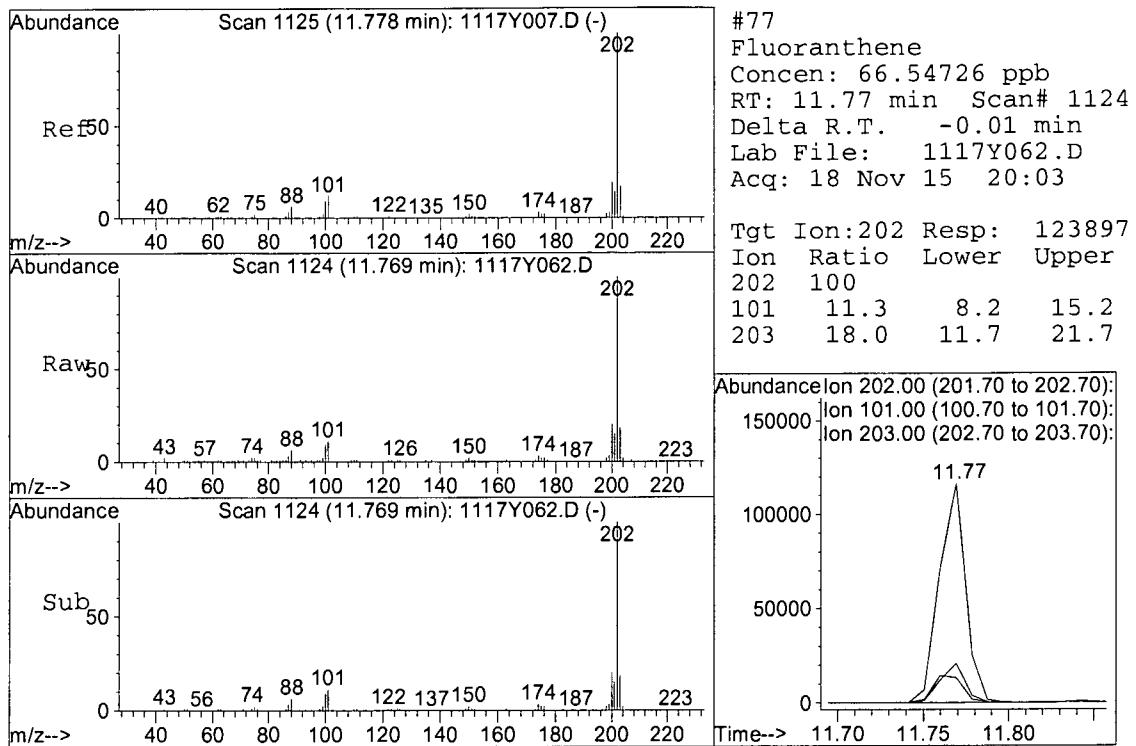


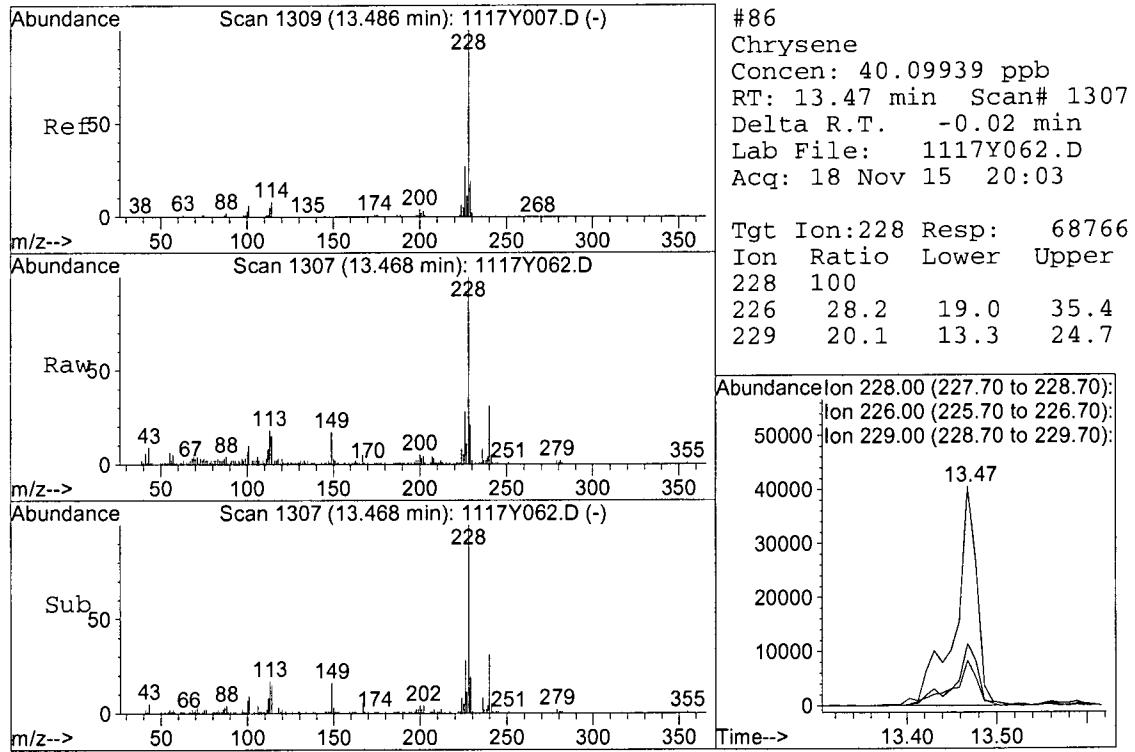
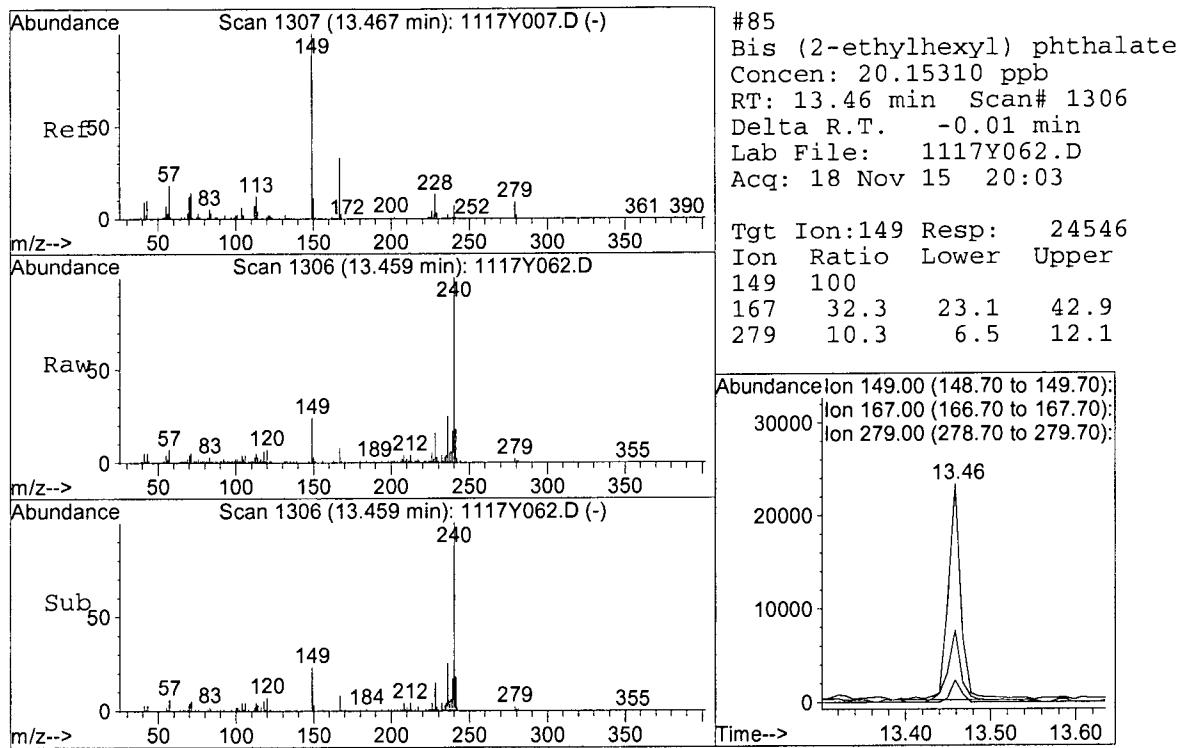
#73
Phenanthrene
Concen: 34.54430 ppb
RT: 10.38 min Scan# 974
Delta R.T. -0.01 min
Lab File: 1117Y062.D
Acq: 18 Nov 15 20:03

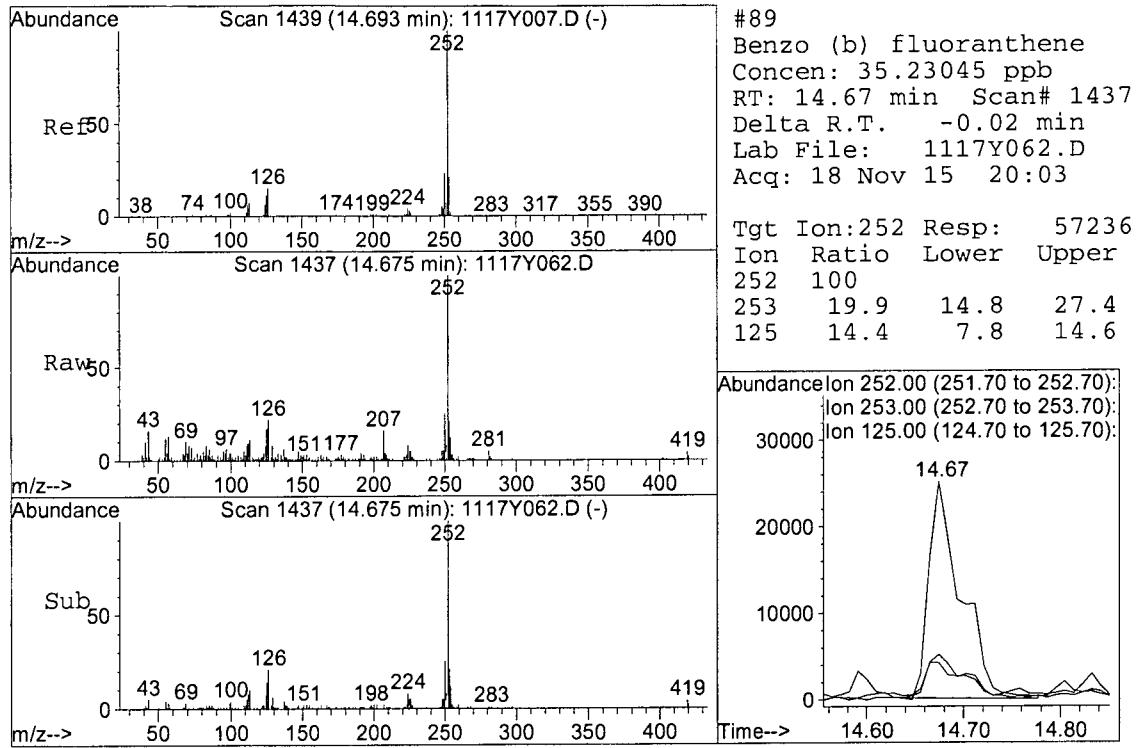


Tgt Ion: 178 Resp: 62429
Ion Ratio Lower Upper
178 100
179 14.6 10.4 19.2
176 18.4 12.5 23.1









EPA 8270D SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS52-0006
Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24400
QCG: #87DJU-151117A-202360

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 19.0 Percent Moisture.)								
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	0.210 U	0.81	0.210	0.077	mg/kg	11/17/15	11/18/15
EPA 8270D	BUTYL BENZYL PHTHALATE	0.210 U	0.41	0.210	0.069	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-BUTYL PHTHALATE	0.210 U	0.41	0.210	0.081	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-OCTYL PHTHALATE	0.210 U	0.41	0.210	0.072	mg/kg	11/17/15	11/18/15
EPA 8270D	DIETHYL PHTHALATE	0.210 U	0.41	0.210	0.077	mg/kg	11/17/15	11/18/15
EPA 8270D	DIMETHYL PHTHALATE	0.210 U	0.41	0.210	0.078	mg/kg	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	49.3	35-125			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	33.3 #	45-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	63.0	35-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	61.0	35-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: PHENOL (S)	69.4	40-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	62.0	30-125			%	11/17/15	11/18/15

= Recovery (or RPD) is outside QC limits.

Quant Method: Y1117.M
Run #: 1117Y063
Instrument: Yoda
Sequence: Y151117
Dilution Factor: 1
Initials: RP

Printed: 11/25/15 3:03:29 PM
PPL-F1-SC-MCRes/MCPQL-REG MDLs-DO

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y063.D Vial: 63
 Acq On : 18 Nov 15 20:31 Operator: MA
 Sample : AZ24400S02 1/30.66G Inst : Yoda
 Misc : soil Multiplr: 32.62

Quant Time: Nov 19 7:54 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	425848	40.00000	ppb	0.00
20) Napthalene-D8 (IS)	6.59	136	1855972	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	1019057	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.35	188	1914450	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.44	240	1686101	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.19	264	991244	40.00000	ppb	-0.02

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.64	112	1815111	4110.82662	ppb	0.00
Spiked Amount	6523.157		Recovery	=	63.019%	
5) Phenol-D6 (S)	4.77	99	2507232	4523.83733	ppb	0.00
Spiked Amount	6523.157		Recovery	=	69.350%	
21) Nitrobenzene-D5 (S)	5.78	82	991326	1988.62229	ppb	0.00
Spiked Amount	3261.579		Recovery	=	60.971%	
45) 2-Fluorobiphenyl (S)	7.84	172	1115107	1086.17239	ppb	0.00
Spiked Amount	3261.579		Recovery	=	33.302%	
63) 2,4,6-Tribromophenol (S)	9.54	330	401359	3218.55614	ppb	0.00
Spiked Amount	6523.157		Recovery	=	49.340%	
81) Terphenyl-D14 (S)	12.23	244	2539369	2020.84929	ppb	0.00
Spiked Amount	3261.579		Recovery	=	61.959%	

Target Compounds

					Qvalue
73) Phenanthrene	10.38	178	73685	43.11645	ppb 99
77) Fluoranthene	11.76	202	47263	26.84507	ppb # 94
80) Pyrene	12.03	202	39077	21.97103	ppb 96

Quantitation Report

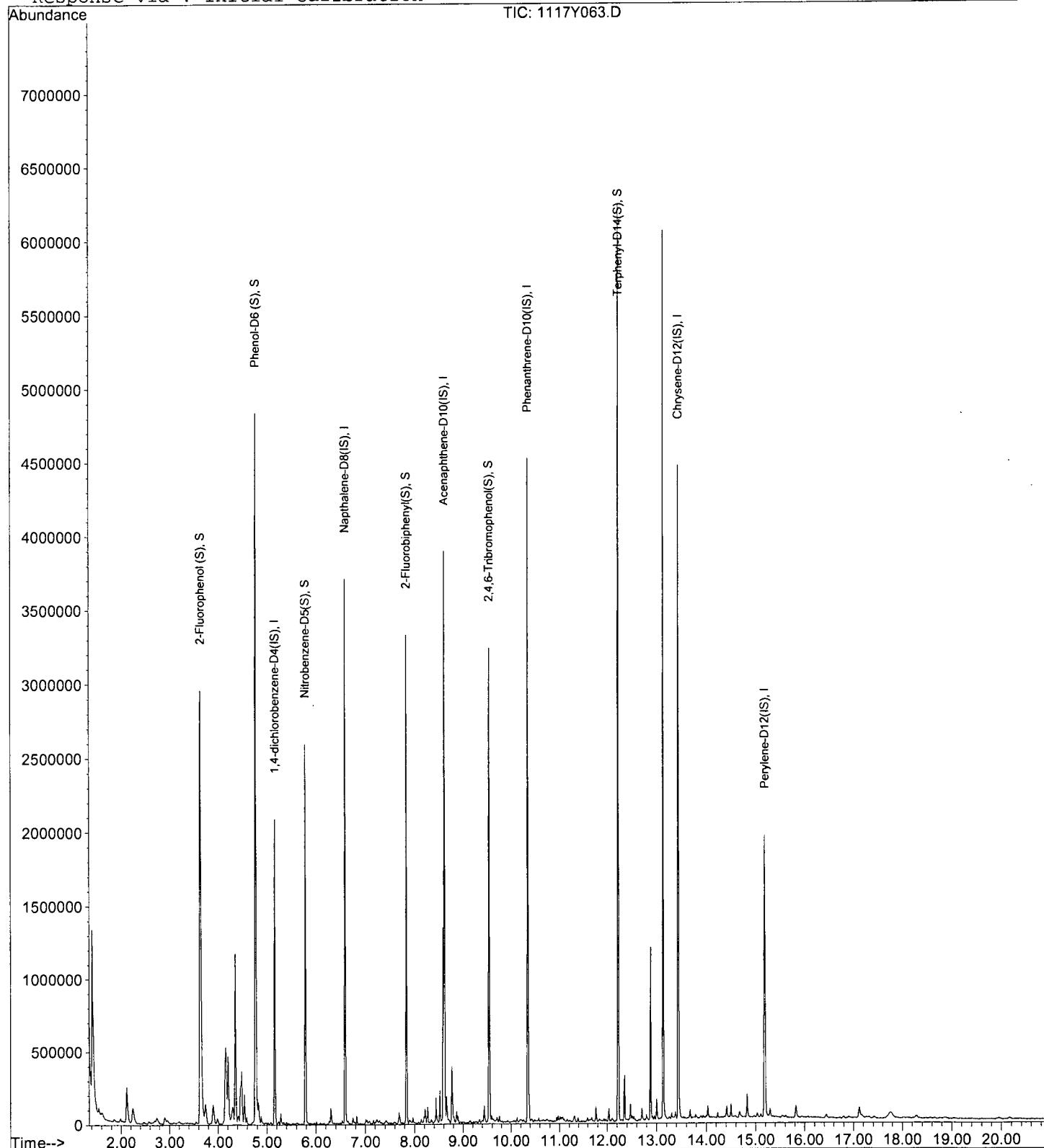
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 Acq On : 18 Nov 15 20:31
 Sample : AZ24400S02 1/30.66G
 Misc : soil

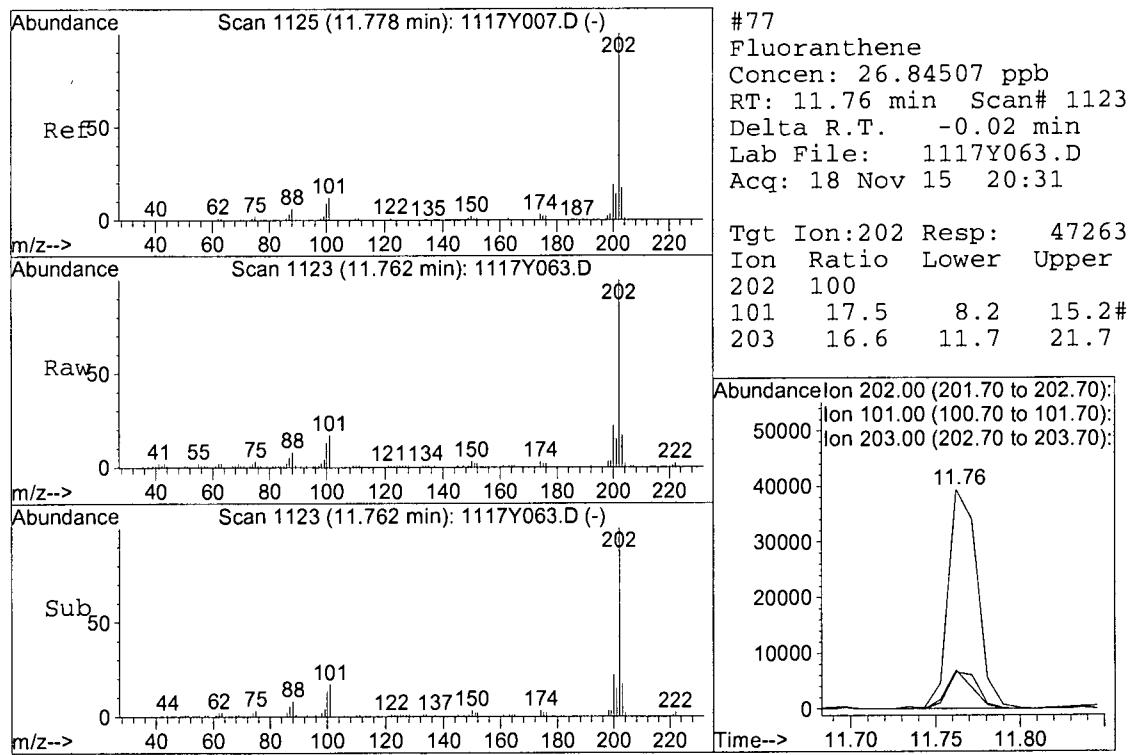
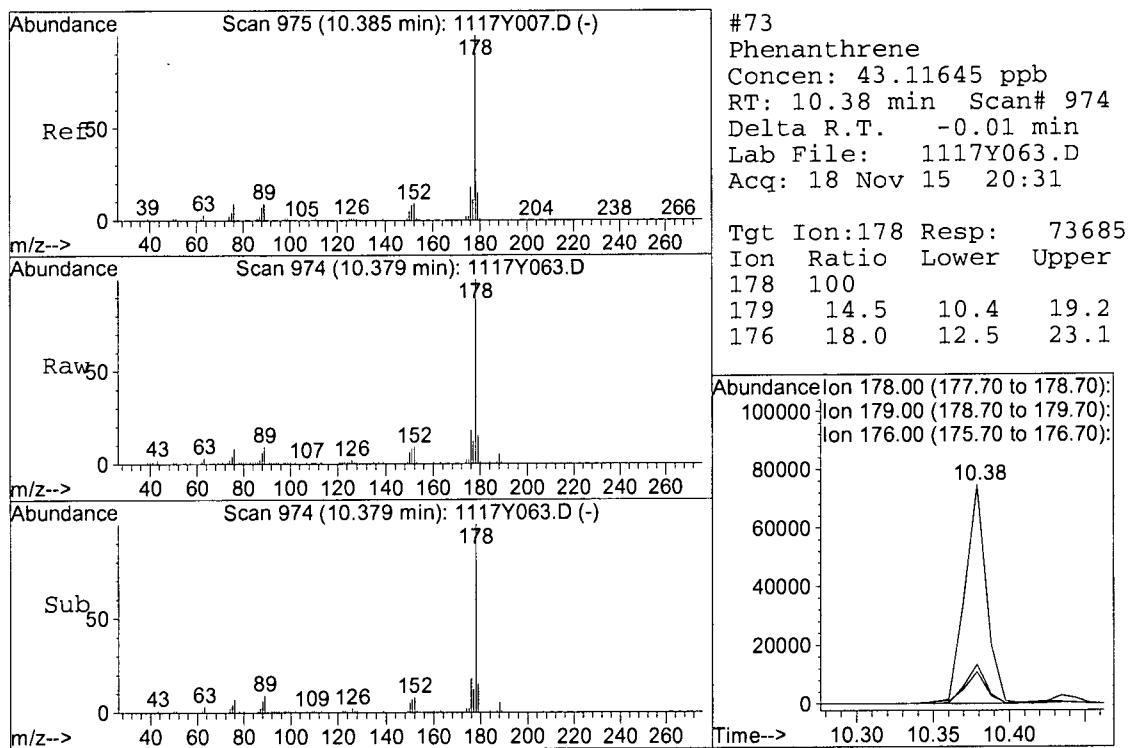
Vial: 63
 Operator: MA
 Inst : Yoda
 Multiplr: 32.62

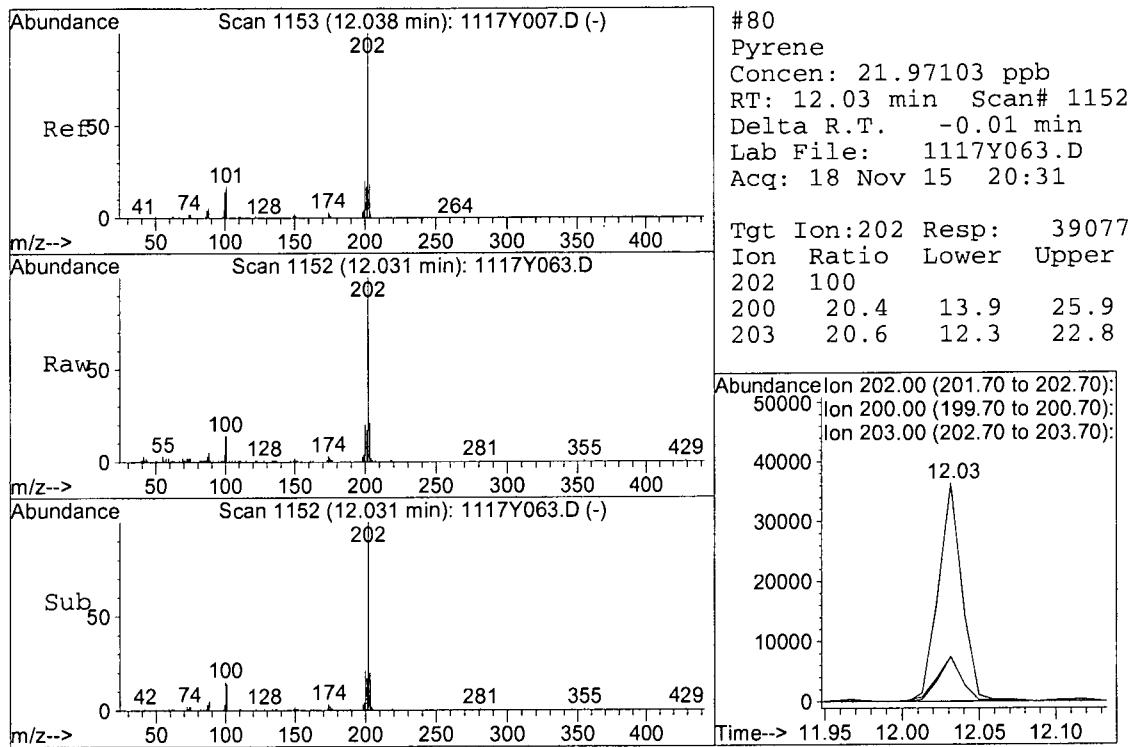
Quant Time: Nov 19 7:54 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration







EPA 8270D SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS53-0006
Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24401
QCG: #87DJU-151117A-202360

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 18.6 Percent Moisture.)								
EPA 8270D	BIS (2-ETHYLHEXYL) PHTHALATE	0.210 U	0.81	0.210	0.076	mg/kg	11/17/15	11/18/15
EPA 8270D	BUTYL BENZYL PHTHALATE	0.210 U	0.41	0.210	0.069	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-BUTYL PHTHALATE	0.210 U	0.41	0.210	0.081	mg/kg	11/17/15	11/18/15
EPA 8270D	DI-N-OCTYL PHTHALATE	0.210 U	0.41	0.210	0.071	mg/kg	11/17/15	11/18/15
EPA 8270D	DIETHYL PHTHALATE	0.210 U	0.41	0.210	0.076	mg/kg	11/17/15	11/18/15
EPA 8270D	DIMETHYL PHTHALATE	0.210 U	0.41	0.210	0.077	mg/kg	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHEN	77.1	35-125			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	53.9	45-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	73.6	35-105			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	75.6	35-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: PHENOL (S)	79.6	40-100			%	11/17/15	11/18/15
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	79.8	30-125			%	11/17/15	11/18/15

Quant Method: Y1117.M
Run #: 1117Y066
Instrument: Yoda
Sequence: Y151117
Dilution Factor: 1
Initials: RP

Printed: 11/25/15 3:03:29 PM
PPL-F1-SC-MCRes/MCPQL-REG MDLs-DO

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y066.D Vial: 66
 Acq On : 18 Nov 15 21:58 Operator: MA
 Sample : AZ24401S03 1/30.96G Inst : Yoda
 Misc : soil Multiplr: 32.30

Quant Time: Nov 19 7:55 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	433851	40.00000	ppb	0.00
20) Napthalene-D8 (IS)	6.59	136	1888972	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.61	164	1037619	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.35	188	1895283	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.44	240	1673157	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.19	264	985151	40.00000	ppb	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.64	112	2160455	4756.15861	ppb	0.00
Spiked Amount 6459.948				Recovery =	73.625%	
5) Phenol-D6 (S)	4.77	99	2933167	5144.39588	ppb	0.00
Spiked Amount 6459.948				Recovery =	79.635%	
21) Nitrobenzene-D5 (S)	5.78	82	1250556	2440.93364	ppb	0.00
Spiked Amount 3229.974				Recovery =	75.571%	
45) 2-Fluorobiphenyl (S)	7.83	172	1839003	1742.19331	ppb	0.00
Spiked Amount 3229.974				Recovery =	53.938%	
63) 2,4,6-Tribromophenol (S)	9.54	330	638388	4979.02701	ppb	0.00
Spiked Amount 6459.948				Recovery =	77.075%	
81) Terphenyl-D14 (S)	12.22	244	3246135	2578.05813	ppb	0.00
Spiked Amount 3229.974				Recovery =	79.817%	
Target Compounds						
26) Benzoic acid	6.30	105	10599	188.14839	ppb	86
85) Bis (2-ethylhexyl) phthala	13.46	149	20188	17.49492	ppb	100

Quantitation Report

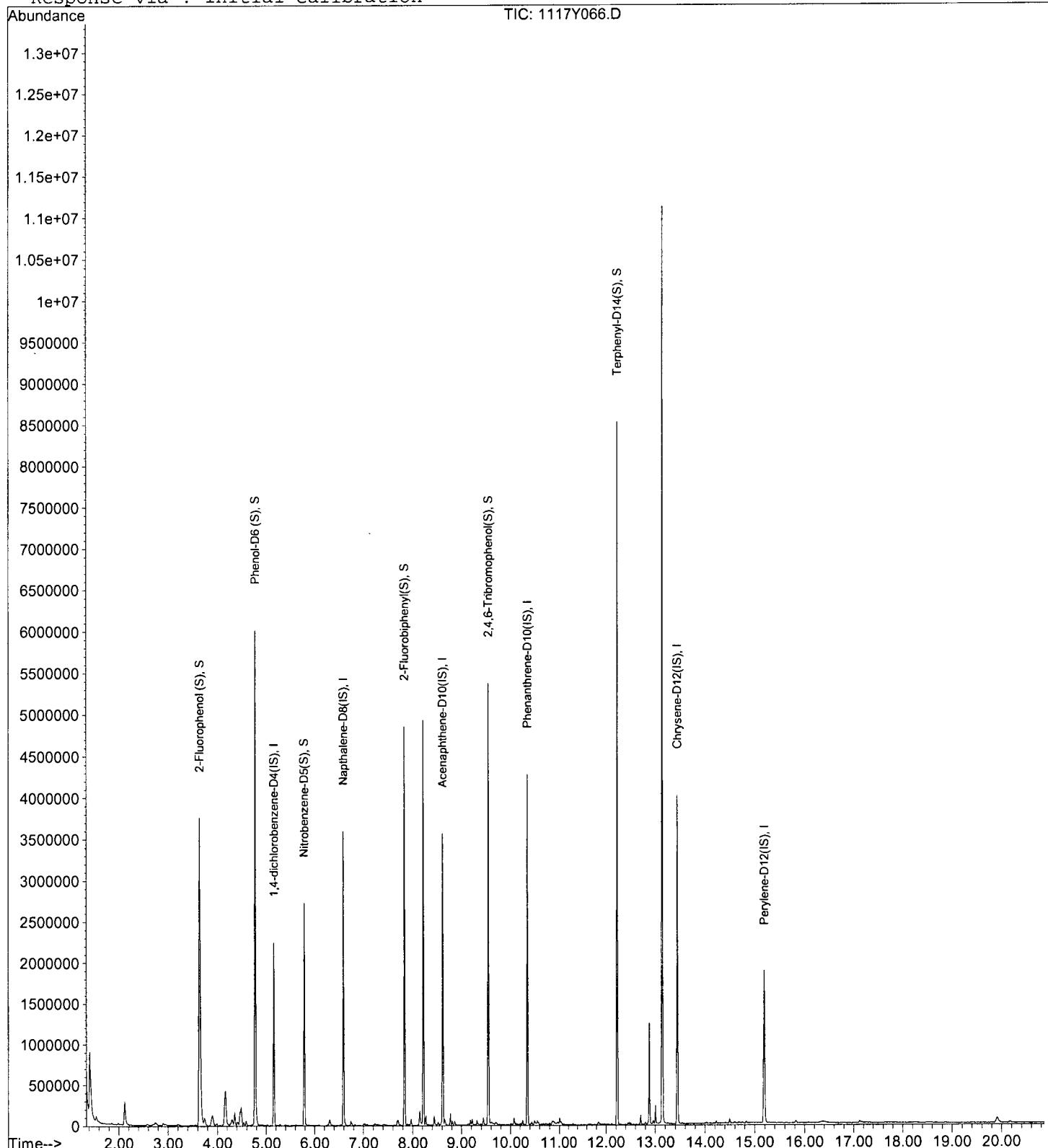
Data File : M:\YODA\DATA\Y151117\1117Y066.D
 Acq On : 18 Nov 15 21:58
 Sample : AZ24401S03 1/30.96G
 Misc : soil

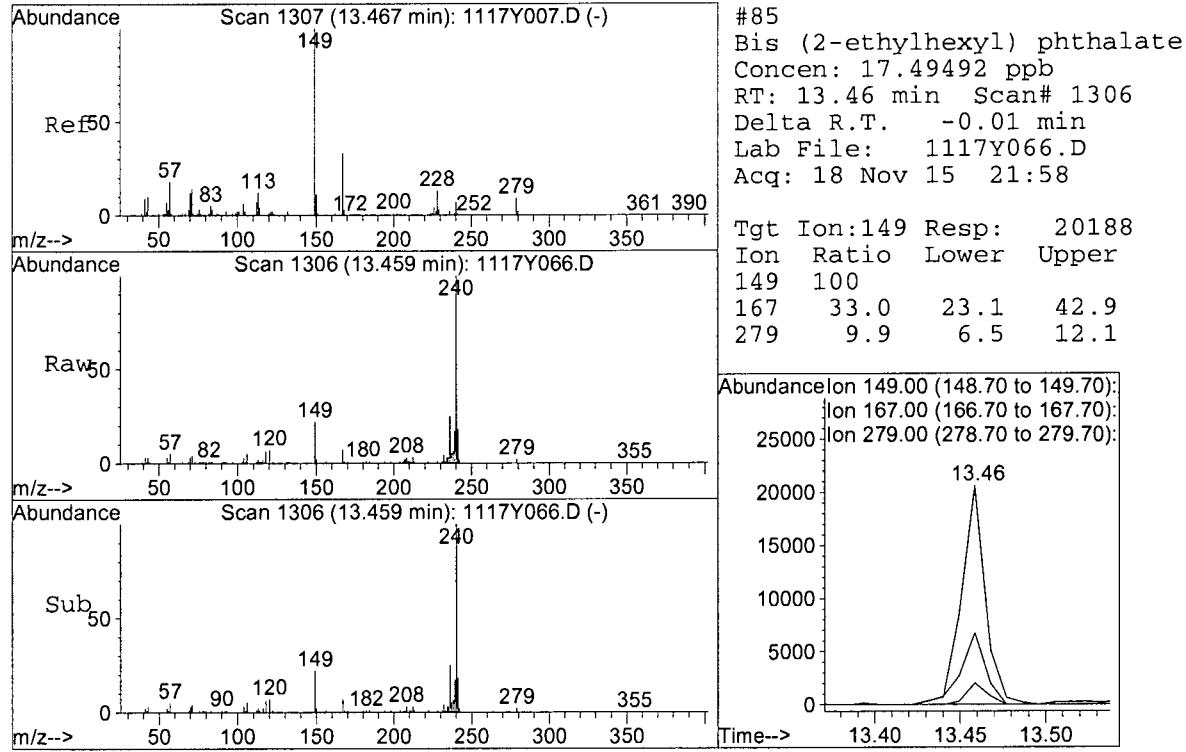
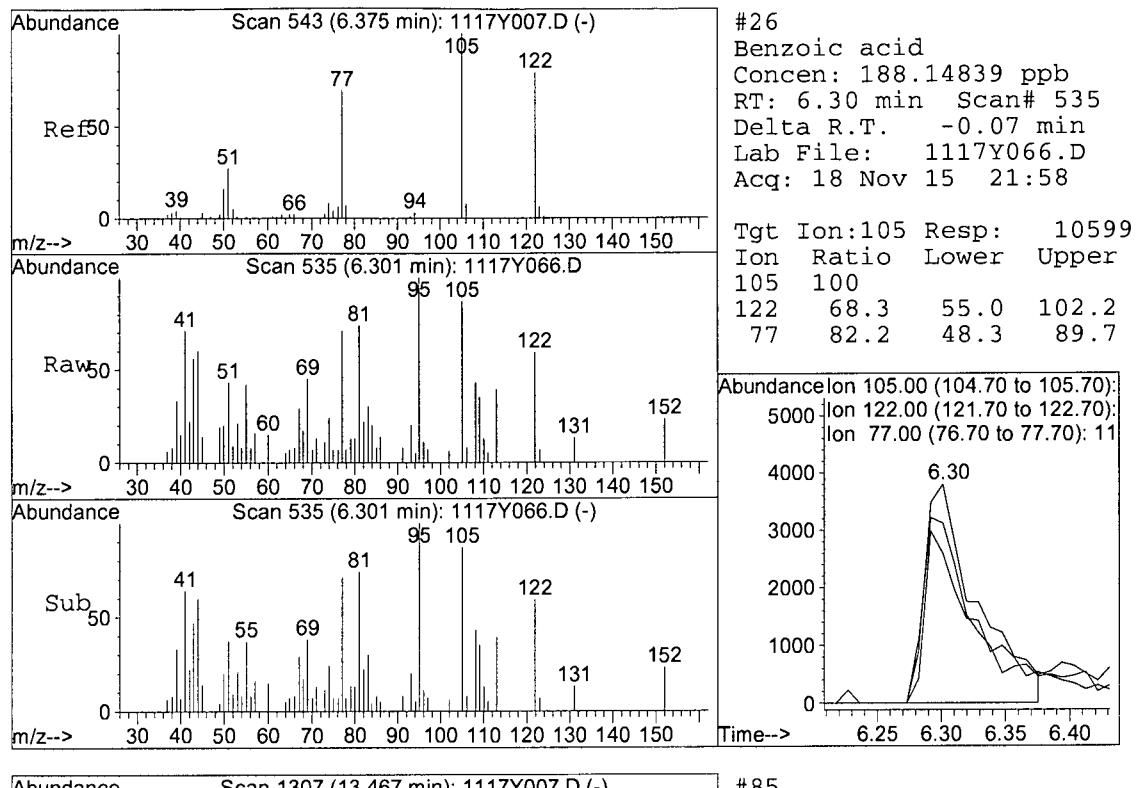
Vial: 66
 Operator: MA
 Inst : Yoda
 Multiplr: 32.30

Quant Time: Nov 19 7:55 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration





EPA METHOD 8270D
Semivolatile Organic Compounds
Calibration Data

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc.

Case No: 77838

Matrix:

SDG No: 77838

Initial Cal. Date: 11/17/15

Instrument: Yoda

Initials:

RP

1117Y003.D 1117Y004.D 1117Y005.D 1117Y006.D 1117Y007.D 1117Y008.D 1117Y009.D 1117Y010.D

	Compound	5	10	20	40	50	60	80	100		Avg	%RSD	
1	I 1,4-dichlorobenzene-D4(IS)										/		
2	TM n-Nitrosodimethylamine	0.3457	0.4233	0.3569	0.3356	0.3645	0.3863	0.3686	0.3860		0.37	7.4	TM
3	TM Pyridine	0.8839	0.9290	1.043	0.9556	0.9367	0.9620	0.9425	0.8923		0.94	5.2	TM
4	S 2-Fluorophenol (S)	1.276	1.340	1.403	1.330	1.378	1.407	1.350	1.337		1.4	3.2	S
5	S Phenol-D6 (S)	1.592	1.695	1.755	1.660	1.745	1.776	1.697	1.663		1.7	3.6	S
6	*TM Phenol	1.966	2.129	2.135	2.038	2.121	2.153	2.056	2.049		2.1	3.1	*TM
7	TM Aniline	1.707	2.043	2.064	1.911	1.946	1.964	1.785	1.645		1.9	8.2	TM
8	TM Bis (2-chloroethyl) ether	1.328	1.447	1.521	1.449	1.511	1.525	1.410	1.406		1.4	4.7	TM
9	TM 2-Chlorophenol	1.479	1.580	1.588	1.557	1.590	1.639	1.568	1.585		1.6	2.9	TM
10	TM 1,3-DCB	1.605	1.712	1.735	1.686	1.718	1.788	1.720	1.714		1.7	3.0	TM
11	*TM 1,4-DCB	1.653	1.776	1.783	1.716	1.762	1.819	1.769	1.764		1.8	2.9	*TM
12	TM Benzyl alcohol	0.8039	0.8964	0.9308	0.9025	0.9534	0.9710	0.9197	0.8994		0.91	5.5	TM
13	TM 1,2-DCB	1.546	1.631	1.660	1.583	1.646	1.691	1.643	1.620		1.6	2.8	TM
14	TM 2-Methylphenol	1.218	1.307	1.306	1.263	1.300	1.355	1.288	1.282		1.3	3.1	TM
15	TM Bis (2-chloroisopropyl) ether	1.663	1.740	1.737	1.639	1.691	1.724	1.648	1.621		1.7	2.8	TM
16	TM Acetophenone	1.777	1.965	1.958	1.899	1.956	2.021	1.936	1.925		1.9	3.7	TM
17	TM 3&4-Methylphenol	1.637	1.756	1.760	1.689	1.753	1.819	1.751	1.715		1.7	3.1	TM
18	**TM n-Nitrosodi-n-propylamine	1.031	1.102	1.113	1.077	1.106	1.152	1.091	1.071		1.1	3.2	**TM
19	TM Hexachloroethane	0.5587	0.5983	0.6135	0.5981	0.6196	0.6389	0.6171	0.6163		0.61	3.9	TM
20	I Naphthalene-D8(IS)												
21	S Nitrobenzene-D5(S)	0.3281	0.3396	0.3572	0.3520	0.3583	0.3621	0.3574	0.3485		0.35	3.3	S
22	TM Nitrobenzene	0.3721	0.3780	0.3817	0.3738	0.3800	0.3896	0.3796	0.3746		0.38	1.5	TM
23	TM Isophorone	0.6136	0.6591	0.6733	0.6612	0.6654	0.6824	0.6666	0.6609		0.66	3.1	TM
24	*TM 2-Nitrophenol	0.1769	0.1922	0.2052	0.2064	0.2096	0.2167	0.2110	0.2107		0.20	6.3	*TM
25	TM 2,4-Dimethylphenol	0.3109	0.3226	0.3219	0.3148	0.3189	0.3291	0.3254	0.3186		0.32	1.8	TM
26	TML Benzoic acid	0.1099	0.1216	0.1841	0.2232	0.2392	0.2486	0.2479	0.2543		0.20	29	TML 0.999
27	TM Bis (2-chloroethoxy) methane	0.3817	0.3923	0.3956	0.3895	0.3893	0.3981	0.3943	0.3827		0.39	1.5	TM
28	*TM 2,4-Dichlorophenol	0.2727	0.2857	0.2927	0.2888	0.2908	0.2995	0.2946	0.2903		0.29	2.7	*TM
29	TM 1,2,4-Trichlorobenzene	0.3136	0.3218	0.3208	0.3168	0.3235	0.3298	0.3288	0.3237		0.32	1.7	TM
30	TM 3,4-Dimethylphenol	0.4974	0.4896	0.4735	0.4701	0.4721	0.4875	0.4759	0.4694		0.48	2.2	TM
31	TM Naphthalene	1.067	1.108	1.123	1.083	1.117	1.146	1.127	1.108		1.1	2.2	TM
32	TM 4-Chloroaniline	0.3397	0.3836	0.4224	0.4074	0.4144	0.4182	0.3969	0.3768		0.39	7.0	TM
33	TM 2,6-Dichlorophenol	0.2807	0.2899	0.2906	0.2885	0.2957	0.3011	0.2932	0.2921		0.29	2.0	TM
34	TM Hexachloropropene	0.1763	0.1965	0.2073	0.2116	0.2185	0.2234	0.2219	0.2233		0.21	7.9	TM
35	*TM Hexachlorobutadiene	0.1629	0.1688	0.1707	0.1703	0.1758	0.1768	0.1739	0.1765		0.17	2.8	*TM

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No: 77838
Matrix: _____

SDG No: 77838
Initial Cal. Date: 11/17/15
Instrument: Yoda

Initials: RP _____

	Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
36	TM Caprolactum	0.1266	0.1337	0.1396	0.1390	0.1396	0.1427	0.1393	0.1363			0.14	3.6	TM	
37	*TM 4-Chloro-3-methylphenol	0.2945	0.3159	0.3253	0.3210	0.3251	0.3322	0.3288	0.3249			0.32	3.7	*TM	
38	TM 2-Methylnaphthalene	0.6882	0.7086	0.7212	0.6978	0.7289	0.7445	0.7248	0.7137			0.72	2.5	TM	
39	TM 1-Methylnaphthalene	0.6958	0.7161	0.7180	0.7065	0.7152	0.7345	0.7350	0.7188			0.72	1.8	TM	
40	I Acenaphthene-D10(IS)														
41	**TML Hexachlorocyclopentadiene	0.1561	0.2124	0.2580	0.3023	0.3293	0.3412	0.3542	0.3617			0.29	26	**TML	0.998
42	TM 1,2,4,5-Tetrachlorobenzene	0.5325	0.5621	0.5503	0.5449	0.5703	0.5657	0.5651	0.5576			0.56	2.3	TM	
43	*TM 2,4,6-Trichlorophenol	0.3515	0.3714	0.3760	0.3858	0.3898	0.3995	0.3949	0.3958			0.38	4.2	*TM	
44	TM 2,4,5-Trichlorophenol	0.3737	0.4107	0.4046	0.4086	0.4214	0.4288	0.4230	0.4225			0.41	4.2	TM	
45	S 2-Fluorobiphenyl(S)	1.261	1.321	1.310	1.289	1.350	1.324	1.346	1.313			1.3	2.2	S	
46	TM 1,1'-Biphenyl	1.557	1.630	1.603	1.573	1.624	1.647	1.634	1.602			1.6	1.9	TM	
47	TM 2-Chloronaphthalene	1.157	1.202	1.202	1.192	1.236	1.245	1.232	1.223			1.2	2.4	TM	
48	TM 2-Nitroaniline	0.3107	0.3440	0.3548	0.3560	0.3654	0.3706	0.3655	0.3580			0.35	5.4	TM	
49	TM Dimethyl phthalate	1.311	1.392	1.370	1.380	1.417	1.429	1.397	1.386			1.4	2.6	TM	
50	TM 2,6-DNT	0.2843	0.3124	0.3181	0.3239	0.3366	0.3413	0.3336	0.3355			0.32	5.8	TM	
51	TM Acenaphthylene	1.924	2.027	2.040	2.002	2.126	2.110	2.098	2.064			2.0	3.2	TM	
52	TM 3-Nitroaniline	0.3142	0.3587	0.3613	0.3583	0.3748	0.3686	0.3646	0.3507			0.36	5.2	TM	
53	*TM Acenaphthene	1.152	1.216	1.210	1.188	1.208	1.241	1.211	1.205			1.2	2.1	*TM	
54	**TML 2,4-Dinitrophenol	0.0627	0.1138	0.1443	0.1773	0.1924	0.2055	0.2129	0.2190			0.17	33	**TML	0.997
55	**TM 4-Nitrophenol	0.2383	0.2651	0.2244	0.2392	0.2476	0.2530	0.2494	0.2478			0.25	4.9	**TM	
56	TM Dibenzofuran	1.702	1.764	1.744	1.706	1.758	1.779	1.744	1.745			1.7	1.5	TM	
57	TM 2,4-DNT	0.3851	0.4402	0.4469	0.4544	0.4626	0.4713	0.4701	0.4607			0.45	6.2	TM	
58	TM 2,3,4,6-Tetrachlorophenol	0.2716	0.2996	0.3079	0.3119	0.3280	0.3374	0.3296	0.3279			0.31	6.8	TM	
59	TM Diethyl phthalate	1.320	1.426	1.385	1.367	1.399	1.431	1.404	1.396			1.4	2.5	TM	
60	TM 4-Chlorophenyl phenyl ether	0.6480	0.6857	0.6818	0.6667	0.6889	0.7082	0.6982	0.6977			0.68	2.8	TM	
61	TM Fluorene	1.383	1.443	1.462	1.447	1.478	1.497	1.491	1.490			1.5	2.6	TM	
62	TM 4-Nitroaniline	0.3159	0.3512	0.3755	0.3487	0.3572	0.3477	0.3405	0.3300			0.35	5.2	TM	
63	S 2,4,6-Tribromophenol(S)	0.1377	0.1477	0.1571	0.1586	0.1655	0.1713	0.1690	0.1702			0.16	7.5	S	
64	I Phenanthrene-D10(IS)														
65	TML 4,6-Dinitro-2-methylphenol	0.0871	0.1230	0.1414	0.1522	0.1587	0.1637	0.1646	0.1707			0.15	19	TML	0.999
66	TM Diphenyl amine	0.5847	0.6202	0.6242	0.6217	0.6397	0.6517	0.6368	0.6448			0.63	3.3	TM	
67	*TM n-Nitrosodiphenylamine	0.5847	0.6202	0.6242	0.6217	0.6397	0.6517	0.6368	0.6448			0.63	3.3	*TM	
68	TM 1,2-Diphenylhydrazine	0.7074	0.7401	0.7331	0.7274	0.7496	0.7492	0.8621	0.8644			0.77	8.0	TM	
69	TM 4-Bromophenyl phenyl ether	0.1825	0.1955	0.2004	0.2012	0.2070	0.2107	0.2103	0.2086			0.20	4.7	TM	
70	TM Hexachlorobenzene	0.1924	0.2066	0.2063	0.2064	0.2165	0.2167	0.2160	0.2213			0.21	4.4	TM	

Form 6
Initial Calibration

Lab Name: APPL, Inc.

Case No: 77838

Matrix:

SDG No: 77838

Initial Cal. Date: 11/17/15

Instrument: Yoda

Initials: RP

		Compound	5	10	20	40	50	60	80	100			Avg	%RSD		
71	TM	Atrazine	0.1777	0.1939	0.1974	0.1976	0.2022	0.2064	0.2032	0.2063			0.20	4.7	TM	
72	*TM	Pentachlorophenol	0.0919	0.1015	0.1097	0.1210	0.1279	0.1315	0.1329	0.1366			0.12	14	*TM	
73	TM	Phenanthrene	1.119	1.154	1.158	1.144	1.177	1.187	1.186	1.192			1.2	2.2	TM	
74	TM	Anthracene	1.117	1.192	1.202	1.185	1.217	1.257	1.225	1.224			1.2	3.4	TM	
75	TM	Carbazol	0.9910	1.047	1.045	1.048	1.072	1.082	1.066	1.070			1.1	2.7	TM	
76	TM	Di-n-butylphthalate	1.099	1.215	1.272	1.267	1.314	1.307	1.293	1.309			1.3	5.8	TM	
77	*TM	Fluoranthene	1.115	1.196	1.203	1.206	1.213	1.226	1.221	1.218			1.2	3.0	*TM	
78	I	Chrysene-D12(IS)														
79	TM	Benzidine	0.3360	0.3545	0.4178	0.4423	0.4577	0.4672	0.4410	0.4236			0.42	11	TM	
80	TM	Pyrene	1.309	1.389	1.369	1.374	1.393	1.438	1.380	1.358			1.4	2.6	TM	
81	S	Terphenyl-D14(S)	0.9038	0.9673	0.9573	0.9628	0.9843	1.005	1.003	0.9955			0.97	3.4	S	
82	TM	Butyl benzylphthalate	0.5165	0.5860	0.5993	0.6238	0.6207	0.6452	0.6271	0.6154			0.60	6.6	TM	
83	TM	3,3'-Dichlorobenzidine	0.3020	0.3492	0.3954	0.3946	0.4015	0.4074	0.3749	0.3580			0.37	9.5	TM	
84	TM	Benz (a) anthracene	1.224	1.291	1.285	1.274	1.286	1.313	1.306	1.294			1.3	2.1	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.7655	0.8416	0.8951	0.9132	0.9349	0.9595	0.9094	0.9093			0.89	6.8	TM	
86	TM	Chrysene	1.154	1.246	1.231	1.254	1.306	1.312	1.263	1.270			1.3	3.9	TM	
87	*TM	Di-n-octylphthalate	1.198	1.364	1.446	1.500	1.536	1.594	1.520	1.524			1.5	8.6	*TM	
88	I	Perylene-D12(IS)														
89	TM	Benzo (b) fluoranthene	1.922	1.998	1.985	2.150	2.174	2.147	1.957	2.247			2.1	5.8	TM	
90	TM	Benzo (k) fluoranthene	1.693	1.876	1.909	1.783	1.868	1.976	2.062	1.813			1.9	6.1	TM	
91	*TM	Benzo (a) pyrene	1.628	1.802	1.800	1.861	1.913	1.952	1.932	1.930			1.9	5.8	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	1.917	2.096	2.129	2.151	2.199	2.253	2.181	2.194			2.1	4.8	TM	
93	TM	Dibenz (a,h) anthracene	1.690	1.799	1.815	1.862	1.921	1.968	1.926	1.967			1.9	5.2	TM	
94	TM	Benzo (g,h,i) perylene	1.678	1.793	1.808	1.812	1.851	1.877	1.842	1.854			1.8	3.4	TM	
95																
96																
97																
98																
99																
100																
101																
102																
103																
104																
105																

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y003.D
 Acq On : 17 Nov 15 12:36
 Sample : 5ug/ml SVOC 11/06/15
 Misc :

Vial: 3
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:31 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:31:31 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	365688	40.00000	ppb	0.00
20) Naphthalene-D8 (IS)	6.60	136	1555049	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	856374	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.36	188	1584037	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.45	240	1450387	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.20	264	856589	40.00000	ppb	0.00

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.64	112	116692	9.98118	ppb	0.00
Spiked Amount	200.000		Recovery	=	4.991%	
5) Phenol-D6 (S)	4.77	99	145545	9.83592	ppb	0.00
Spiked Amount	200.000		Recovery	=	4.918%	
21) Nitrobenzene-D5 (S)	5.78	82	63780	5.07516	ppb	0.00
Spiked Amount	100.000		Recovery	=	5.075%	
45) 2-Fluorobiphenyl(S)	7.84	172	134950	5.41842	ppb	0.00
Spiked Amount	100.000		Recovery	=	5.418%	
63) 2,4,6-Tribromophenol(S)	9.54	330	29485	9.72179	ppb	0.00
Spiked Amount	200.000		Recovery	=	4.861%	
81) Terphenyl-D14 (S)	12.23	244	163859	5.03815	ppb	0.00
Spiked Amount	100.000		Recovery	=	5.038%	

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) n-Nitrosodimethylamine	1.92	42	15800	4.96791	ppb	97
3) Pyridine	1.95	79	40404	5.22584	ppb	96
6) Phenol	4.79	94	89860	5.17860	ppb	88
7) Aniline	4.80	93	78022	7.66906	ppb	83
8) Bis (2-chloroethyl) ether	4.87	93	60720	4.49427	ppb	96
9) 2-Chlorophenol	4.93	128	67627	4.95992	ppb	95
10) 1,3-DCB	5.10	146	73383	4.98760	ppb	98
11) 1,4-DCB	5.18	146	75564	5.02145	ppb	98
12) Benzyl alcohol	5.33	108	36746	5.59222	ppb	93
13) 1,2-DCB	5.35	146	70660	5.03232	ppb	98
14) 2-Methylphenol	5.46	107	55666	4.96131	ppb	97
15) Bis (2-chloroisopropyl) et	5.47	45	76013	5.30837	ppb	# 90
16) Acetophenone	5.62	105	81206	4.78431	ppb	99
17) 3&4-Methylphenol	5.63	107	149694	9.87573	ppb	99
18) n-Nitrosodi-n-propylamine	5.62	70	47119	4.87646	ppb	98
19) Hexachloroethane	5.72	117	25538	4.86973	ppb	# 71
22) Nitrobenzene	5.81	77	72334	5.36713	ppb	95
23) Isophorone	6.07	82	119263	5.04972	ppb	94
24) 2-Nitrophenol	6.16	139	34377	4.73191	ppb	# 85
25) 2,4-Dimethylphenol	6.22	122	60428	5.34062	ppb	100
26) Benzoic acid	6.31	105	21361	8.70025	ppb	93
27) Bis (2-chloroethoxy) metha	6.32	93	74186	5.36532	ppb	99
28) 2,4-Dichlorophenol	6.45	162	52998	5.15018	ppb	98
29) 1,2,4-Trichlorobenzene	6.53	180	60965	5.34982	ppb	92
30) 3,4-Dimethylphenol	6.56	107	96686	5.64488	ppb	94
31) Naphthalene	6.62	128	207425	5.27215	ppb	99
32) 4-Chloroaniline	6.69	127	66025	7.72235	ppb	95
33) 2,6-Dichlorophenol	6.69	162	54569	5.24738	ppb	95
34) Hexachloropropene	6.72	213	34262	4.50523	ppb	92
35) Hexachlorobutadiene	6.76	225	31662	5.14783	ppb	96
36) Caprolactum	7.07	55	24605	5.04833	ppb	98
37) 4-Chloro-3-methylphenol	7.26	107	57248	5.04825	ppb	96

(#= qualifier out of range (m)= manual integration

1117Y003.D Y1117.M Wed Nov 18 07:42:24 2015

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y003.D
 Acq On : 17 Nov 15 12:36
 Sample : 5ug/ml SVOC 11/06/15
 Misc :

Vial: 3
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:31 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)

Title : EPA 8270C

Last Update : Wed Nov 18 07:31:31 2015

Response via : Initial Calibration

DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.42	142	133768	5.18248	ppb	96
39) 1-Methylnaphthalene	7.53	142	135250	5.26297	ppb	98
41) Hexachlorocyclopentadiene	7.59	237	16706	5.85683	ppb	97
42) 1,2,4,5-Tetrachlorobenzene	7.60	216	57001	5.40222	ppb	97
43) 2,4,6-Trichlorophenol	7.74	196	37628	5.16505	ppb	99
44) 2,4,5-Trichlorophenol	7.80	196	39998	5.07279	ppb	# 92
46) 1,1'-Biphenyl	7.95	154	166725	5.41053	ppb	97
47) 2-Chloronaphthalene	7.97	162	123863	5.37713	ppb	95
48) 2-Nitroaniline	8.10	65	33257	4.93335	ppb	88
49) Dimethyl phthalate	8.32	163	140363	5.28762	ppb	99
50) 2,6-DNT	8.39	165	30432	4.92878	ppb	97
51) Acenaphthylene	8.46	152	205920	5.21138	ppb	98
52) 3-Nitroaniline	8.59	138	33636	5.08666	ppb	96
53) Acenaphthene	8.66	154	123286	5.33542	ppb	96
54) 2,4-Dinitrophenol	8.72	184	6713	6.24256	ppb	94
55) 4-Nitrophenol	8.82	65	25504	5.20879	ppb	90
56) Dibenzofuran	8.86	168	182154	5.48100	ppb	97
57) 2,4-DNT	8.86	165	41228	4.78121	ppb	90
58) 2,3,4,6-Tetrachlorophenol	9.01	232	29074	4.82148	ppb	90
59) Diethyl phthalate	9.13	149	141341	5.30254	ppb	99
60) 4-Chlorophenyl phenyl ethe	9.26	204	69361	5.35057	ppb	95
61) Fluorene	9.26	166	148002	5.30024	ppb	99
62) 4-Nitroaniline	9.29	138	33818	4.99264	ppb	87
65) 4,6-Dinitro-2-methylphenol	9.33	198	17253	5.10561	ppb	# 83
66) Diphenyl amine	9.40	169	231539	10.45831	ppb	99
67) n-Nitrosodiphenylamine	9.40	169	231539	10.45831	ppb	99
68) 1,2-Diphenylhydrazine	9.45	77	140078	5.20123	ppb	# 91
69) 4-Bromophenyl phenyl ether	9.84	248	36137	5.00822	ppb	93
70) Hexachlorobenzene	9.90	284	38100	5.10762	ppb	# 84
71) Atrazine	10.03	200	17591	2.42799	ppb	96
72) Pentachlorophenol	10.14	266	18204	4.25965	ppb	97
73) Phenanthrene	10.39	178	221614	5.41253	ppb	100
74) Anthracene	10.44	178	221101	5.20793	ppb	99
75) Carbazol	10.64	167	196213	5.23758	ppb	98
76) Di-n-butylphthalate	11.05	149	217597	4.81485	ppb	99
77) Fluoranthene	11.77	202	220842	5.17769	ppb	# 93
79) Benzidine	11.95	184	60916	5.60379	ppb	98
80) Pyrene	12.04	202	237286	5.13696	ppb	99
82) Butyl benzylphthalate	12.80	149	93641	4.57293	ppb	97
83) 3,3'-Dichlorobenzidine	13.41	252	54760	4.44852	ppb	# 99
84) Benz (a) anthracene	13.43	228	221956	5.15516	ppb	98
85) Bis (2-ethylhexyl) phthala	13.47	149	138778	4.57507	ppb	96
86) Chrysene	13.48	228	209192	4.88783	ppb	98
87) Di-n-octylphthalate	14.19	149	217128	4.30958	ppb	# 92
89) Benzo (b) fluoranthene	14.69	252	205788	5.13135	ppb	99
90) Benzo (k) fluoranthene	14.72	252	181243	4.84633	ppb	97
91) Benzo (a) pyrene	15.12	252	174327	4.78984	ppb	98
92) Indeno (1,2,3-cd) pyrene	16.92	276	205307	4.84099	ppb	99
93) Dibenz (a,h) anthracene	16.96	278	180983	4.89477	ppb	100
94) Benzo (g,h,i) perylene	17.44	276	179658	5.00684	ppb	98

(#= qualifier out of range (m) = manual integration

1117Y003.D Y1117.M Wed Nov 18 07:42:25 2015

Quantitation Report

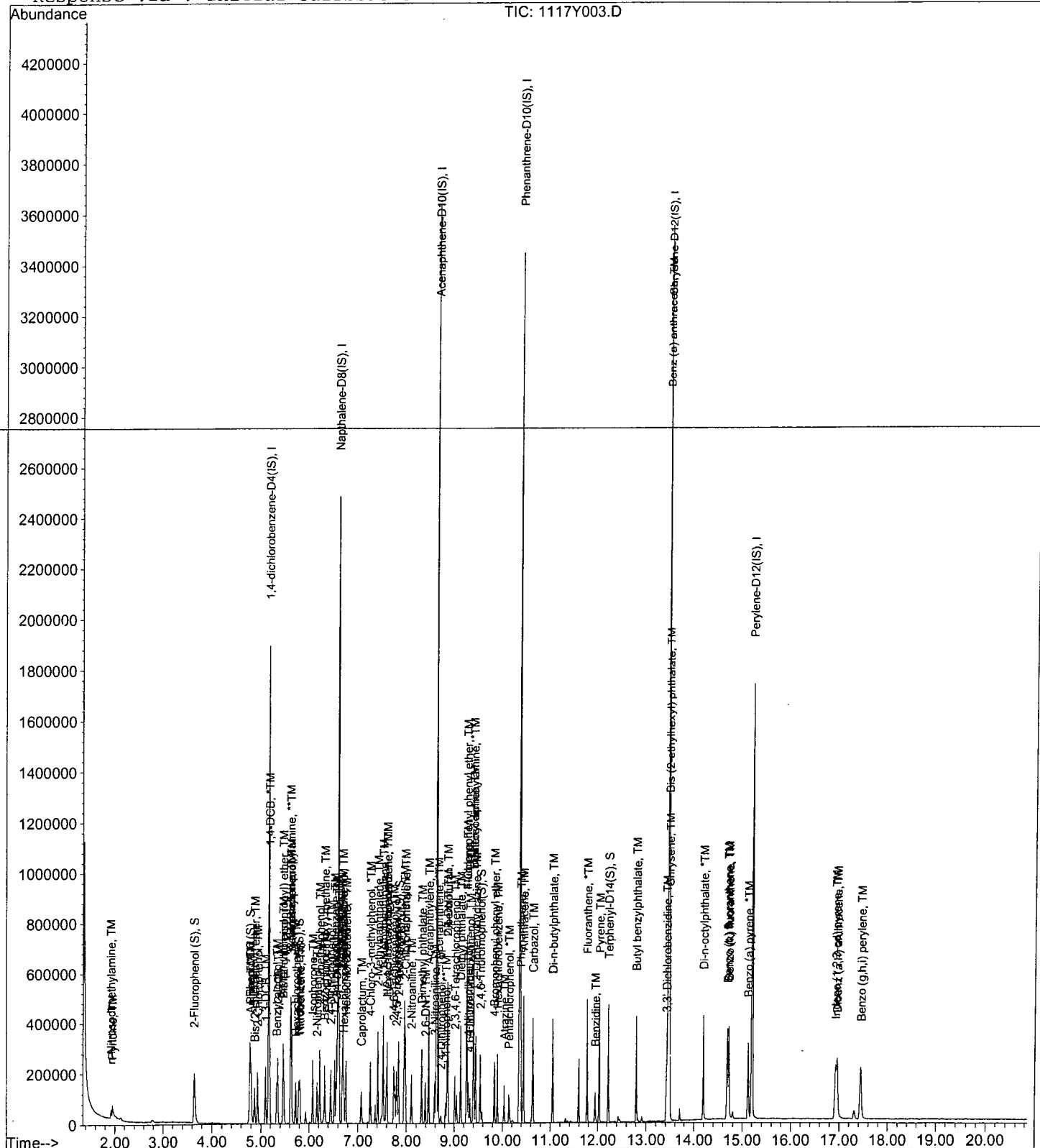
Data File : M:\YODA\DATA\Y151117\1117Y003.D
 Acq On : 17 Nov 15 12:36
 Sample : 5ug/ml SVOC 11/06/15
 Misc :

Vial: 3
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:31 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y004.D
 Acq On : 17 Nov 15 13:04
 Sample : 10ug/ml SVOC 11/06/15
 Misc :

Vial: 4
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:31 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:31:31 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	375041	40.00000	ppb	0.00
20) Naphthalene-D8 (IS)	6.60	136	1654353	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	924256	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.36	188	1734021	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.45	240	1553906	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.19	264	930495	40.00000	ppb	-0.01

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.64	112	251186	20.94924	ppb	-0.01
Spiked Amount 200.000			Recovery	= 10.475%		
5) Phenol-D6 (S)	4.77	99	317825	20.94293	ppb	-0.01
Spiked Amount 200.000			Recovery	= 10.472%		
21) Nitrobenzene-D5 (S)	5.78	82	140450	10.50517	ppb	-0.01
Spiked Amount 100.000			Recovery	= 10.505%		
45) 2-Fluorobiphenyl (S)	7.84	172	305195	11.35399	ppb	0.00
Spiked Amount 100.000			Recovery	= 11.354%		
63) 2,4,6-Tribromophenol (S)	9.54	330	68273	20.85765	ppb	-0.01
Spiked Amount 200.000			Recovery	= 10.429%		
81) Terphenyl-D14 (S)	12.22	244	375755	10.78363	ppb	0.00
Spiked Amount 100.000			Recovery	= 10.784%		

Target Compounds

				Qvalue
2) n-Nitrosodimethylamine	1.91	42	39689	12.16799 ppb 80
3) Pyridine	1.94	79	87105	10.98517 ppb 98
6) Phenol	4.78	94	199585	11.21517 ppb 96
7) Aniline	4.80	93	191598	18.36318 ppb # 76
8) Bis (2-chloroethyl) ether	4.87	93	135660	9.79064 ppb 98
9) 2-Chlorophenol	4.93	128	148161	10.59548 ppb 96
10) 1,3-DCB	5.09	146	160484	10.63556 ppb 97
11) 1,4-DCB	5.18	146	166561	10.79244 ppb 99
12) Benzyl alcohol	5.33	108	84051	12.47238 ppb 93
13) 1,2-DCB	5.34	146	152941	10.62064 ppb 98
14) 2-Methylphenol	5.45	107	122506	10.64623 ppb 96
15) Bis (2-chloroisopropyl) et	5.46	45	163182	11.11163 ppb 92
16) Acetophenone	5.61	105	184246	10.58428 ppb 98
17) 3&4-Methylphenol	5.63	107	329226	21.17828 ppb 99
18) n-Nitrosodi-n-propylamine	5.61	70	103344	10.42859 ppb 98
19) Hexachloroethane	5.72	117	56098	10.43032 ppb 93
22) Nitrobenzene	5.81	77	156353	10.90491 ppb 94
23) Isophorone	6.07	82	272584	10.84870 ppb 92
24) 2-Nitrophenol	6.16	139	79501	10.28624 ppb 87
25) 2,4-Dimethylphenol	6.22	122	133403	11.08242 ppb 100
26) Benzoic acid	6.30	105	50285	11.93951 ppb 95
27) Bis (2-chloroethoxy) metha	6.32	93	162262	11.03079 ppb 98
28) 2,4-Dichlorophenol	6.45	162	118170	10.79410 ppb 98
29) 1,2,4-Trichlorobenzene	6.53	180	133111	10.97964 ppb 99
30) 3,4-Dimethylphenol	6.56	107	202475	11.11164 ppb 96
31) Naphthalene	6.62	128	458418	10.95227 ppb 98
32) 4-Chloroaniline	6.69	127	158651	13.13518 ppb 95
33) 2,6-Dichlorophenol	6.69	162	119900	10.83756 ppb 97
34) Hexachloropropene	6.72	213	81267	10.04463 ppb 99
35) Hexachlorobutadiene	6.75	225	69824	10.67103 ppb 97
36) Caprolactum	7.07	55	55309	10.66684 ppb 93
37) 4-Chloro-3-methylphenol	7.26	107	130635	10.82820 ppb 99

(#) = qualifier out of range (m) = manual integration

1117Y004.D Y1117.M Wed Nov 18 07:42:30 2015

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y004.D
 Acq On : 17 Nov 15 13:04
 Sample : 10ug/ml SVOC 11/06/15
 Misc :

Vial: 4
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:31 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:31:31 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.41	142	293056	10.67216	ppb	99
39) 1-Methylnaphthalene	7.53	142	296191	10.83382	ppb	97
41) Hexachlorocyclopentadiene	7.59	237	49083	9.83365	ppb	94
42) 1,2,4,5-Tetrachlorobenzene	7.60	216	129885	11.40565	ppb	98
43) 2,4,6-Trichlorophenol	7.75	196	85809	10.91358	ppb	96
44) 2,4,5-Trichlorophenol	7.79	196	94904	11.15230	ppb	92
46) 1,1'-Biphenyl	7.95	154	376560	11.32255	ppb	98
47) 2-Chloronaphthalene	7.97	162	277753	11.17221	ppb	96
48) 2-Nitroaniline	8.10	65	79483	10.92456	ppb	88
49) Dimethyl phthalate	8.31	163	321750	11.23045	ppb	99
50) 2,6-DNT	8.39	165	72180	10.83170	ppb	89
51) Acenaphthylene	8.45	152	468418	10.98397	ppb	99
52) 3-Nitroaniline	8.58	138	82880	11.61312	ppb	95
53) Acenaphthene	8.66	154	281089	11.27119	ppb	98
54) 2,4-Dinitrophenol	8.71	184	26298	10.24925	ppb	93
55) 4-Nitrophenol	8.81	65	61248	11.59023	ppb	93
56) Dibenzofuran	8.86	168	407579	11.36328	ppb	96
57) 2,4-DNT	8.85	165	101704	10.92834	ppb	95
58) 2,3,4,6-Tetrachlorophenol	9.01	232	69218	10.63569	ppb	94
59) Diethyl phthalate	9.13	149	329393	11.44988	ppb	99
60) 4-Chlorophenyl phenyl ethe	9.26	204	158431	11.32390	ppb	94
61) Fluorene	9.26	166	333470	11.06511	ppb	100
62) 4-Nitroaniline	9.29	138	81158	11.10159	ppb	88
65) 4,6-Dinitro-2-methylphenol	9.33	198	53324	10.27017	ppb	# 80
66) Diphenyl amine	9.40	169	537688	22.18599	ppb	99
67) n-Nitrosodiphenylamine	9.40	169	537688	22.18599	ppb	99
68) 1,2-Diphenylhydrazine	9.45	77	320847	10.88292	ppb	# 90
69) 4-Bromophenyl phenyl ether	9.84	248	84731	10.72715	ppb	90
70) Hexachlorobenzene	9.89	284	89556	10.96729	ppb	# 84
71) Atrazine	10.03	200	42025	5.29876	ppb	99
72) Pentachlorophenol	10.13	266	43984	9.40184	ppb	98
73) Phenanthrene	10.38	178	500169	11.15913	ppb	100
74) Anthracene	10.44	178	516711	11.11816	ppb	100
75) Carbazol	10.64	167	454086	11.07266	ppb	97
76) Di-n-butylphthalate	11.04	149	526600	10.64441	ppb	98
77) Fluoranthene	11.77	202	518467	11.10419	ppb	# 95
79) Benzidine	11.94	184	137725	10.99800	ppb	99
80) Pyrene	12.04	202	539419	10.89982	ppb	100
82) Butyl benzylphthalate	12.80	149	227643	10.37628	ppb	95
83) 3,3'-Dichlorobenzidine	13.41	252	135660	10.28640	ppb	# 97
84) Benz (a) anthracene	13.43	228	501603	10.87414	ppb	98
85) Bis (2-ethylhexyl) phthalate	13.47	149	326951	10.06048	ppb	99
86) Chrysene	13.48	228	484114	10.55791	ppb	98
87) Di-n-octylphthalate	14.19	149	529830	9.81556	ppb	# 92
89) Benzo (b) fluoranthene	14.68	252	464864	10.67078	ppb	97
90) Benzo (k) fluoranthene	14.72	252	436454	10.74357	ppb	99
91) Benzo (a) pyrene	15.12	252	419158	10.60212	ppb	100
92) Indeno (1,2,3-cd) pyrene	16.92	276	487586	10.58375	ppb	99
93) Dibenz (a,h) anthracene	16.96	278	418439	10.41801	ppb	99
94) Benzo (g,h,i) perylene	17.44	276	417028	10.69895	ppb	99

(#) = qualifier out of range (m) = manual integration
 1117Y004.D Y1117.M Wed Nov 18 07:42:31 2015

Quantitation Report

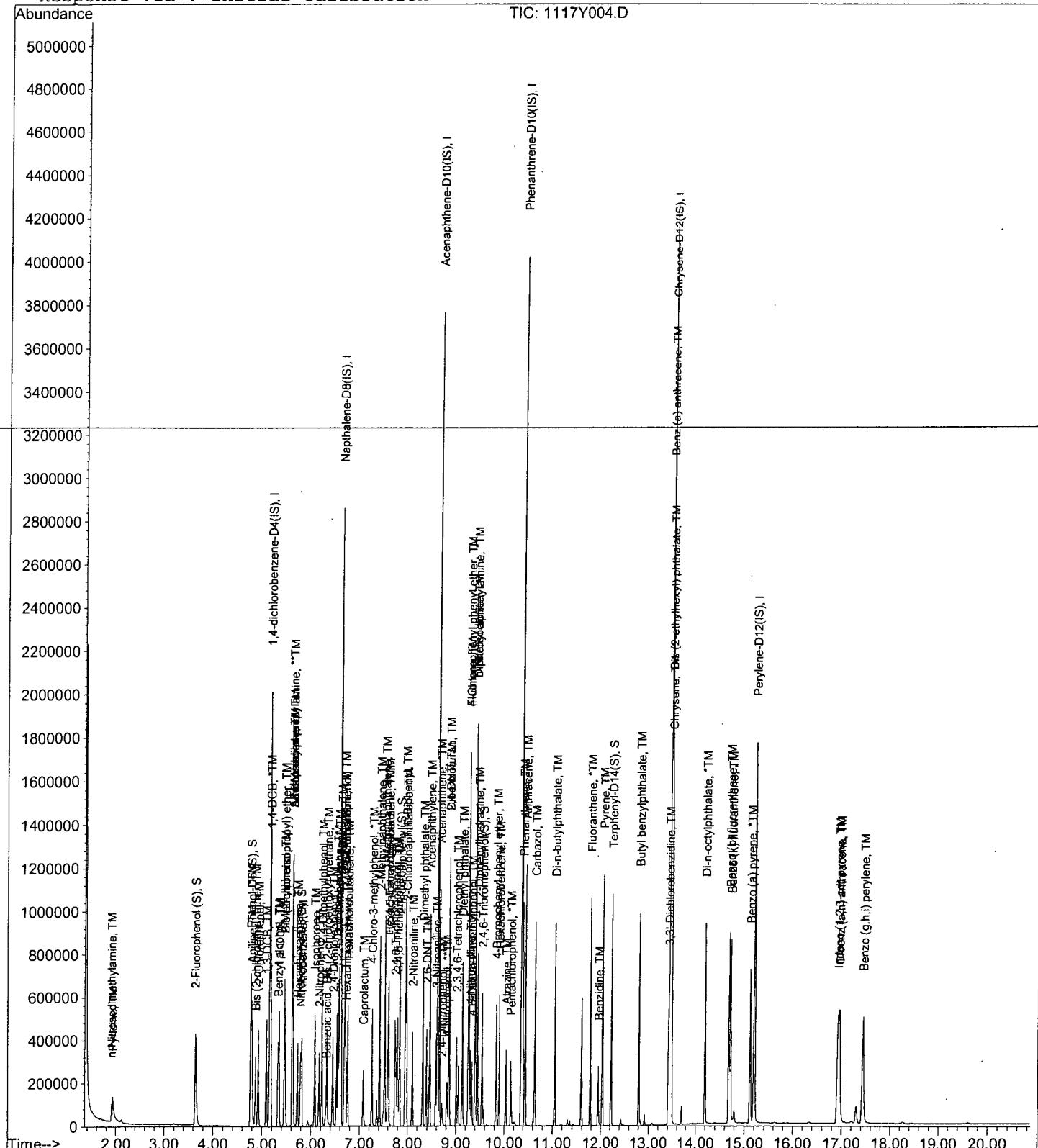
Data File : M:\YODA\DATA\Y151117\1117Y004.D
 Acq On : 17 Nov 15 13:04
 Sample : 10ug/ml SVOC 11/06/15
 Misc :

Vial: 4
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:31 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y005.D
 Acq On : 17 Nov 15 13:34
 Sample : 20ug/ml SVOC 11/06/15
 Misc :

Vial: 5
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:31 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:31:31 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4(IS)	5.16	152	361734	40.00000	ppb	0.00
20) Napthalene-D8 (IS)	6.60	136	1584876	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	894675	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.36	188	1654802	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.45	240	1496402	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.19	264	893896	40.00000	ppb	0.00

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.64	112	507656	43.89670	ppb	0.00
Spiked Amount 200.000			Recovery	= 21.949%		
5) Phenol-D6 (S)	4.77	99	634888	43.37465	ppb	0.00
Spiked Amount 200.000			Recovery	= 21.688%		
21) Nitrobenzene-D5 (S)	5.78	82	283092	22.10251	ppb	0.00
Spiked Amount 100.000			Recovery	= 22.103%		
45) 2-Fluorobiphenyl (S)	7.84	172	586044	22.52311	ppb	0.00
Spiked Amount 100.000			Recovery	= 22.523%		
63) 2,4,6-Tribromophenol (S)	9.55	330	140546	44.35696	ppb	0.00
Spiked Amount 200.000			Recovery	= 22.179%		
81) Terphenyl-D14 (S)	12.22	244	716271	21.34587	ppb	0.00
Spiked Amount 100.000			Recovery	= 21.346%		

Target Compounds

				Qvalue
2) n-Nitrosodimethylamine	1.91	42	64548	20.51733 ppb 96
3) Pyridine	1.93	79	188596	24.65957 ppb 99
6) Phenol	4.78	94	386210	22.50043 ppb 96
7) Aniline	4.80	93	373319	37.09594 ppb # 74
8) Bis (2-chloroethyl) ether	4.87	93	275103	20.58467 ppb 99
9) 2-Chlorophenol	4.93	128	287230	21.29638 ppb 95
10) 1,3-DCB	5.09	146	313865	21.56556 ppb 99
11) 1,4-DCB	5.18	146	322553	21.66891 ppb 99
12) Benzyl alcohol	5.33	108	168348	25.90025 ppb 92
13) 1,2-DCB	5.34	146	300213	21.61452 ppb 97
14) 2-Methylphenol	5.46	107	236227	21.28421 ppb 96
15) Bis (2-chloroisopropyl) et	5.47	45	314121	22.17645 ppb # 89
16) Acetophenone	5.61	105	354053	21.08730 ppb 99
17) 3&4-Methylphenol	5.63	107	636607	42.45779 ppb 98
18) n-Nitrosodi-n-propylamine	5.61	70	201355	21.06650 ppb 99
19) Hexachloroethane	5.73	117	110960	21.38978 ppb 92
22) Nitrobenzene	5.81	77	302477	22.02120 ppb 93
23) Isophorone	6.08	82	533521	22.16470 ppb 99
24) 2-Nitrophenol	6.16	139	162589	21.95879 ppb 87
25) 2,4-Dimethylphenol	6.22	122	255058	22.11775 ppb 99
26) Benzoic acid	6.32	105	145921	23.93197 ppb 96
27) Bis (2-chloroethoxy) metha	6.32	93	313522	22.24798 ppb 99
28) 2,4-Dichlorophenol	6.45	162	231968	22.11770 ppb 98
29) 1,2,4-Trichlorobenzene	6.53	180	254239	21.89017 ppb 99
30) 3,4-Dimethylphenol	6.56	107	375187	21.49252 ppb 97
31) Naphthalene	6.62	128	889519	22.18354 ppb 99
32) 4-Chloroaniline	6.69	127	334688	24.81120 ppb 94
33) 2,6-Dichlorophenol	6.69	162	230243	21.72360 ppb 97
34) Hexachloropropene	6.72	213	164255	21.19197 ppb 99
35) Hexachlorobutadiene	6.76	225	135306	21.58498 ppb 98
36) Caprolactum	7.08	55	110644	22.27414 ppb 96
37) 4-Chloro-3-methylphenol	7.26	107	257804	22.30588 ppb 98

(#) = qualifier out of range (m) = manual integration
 1117Y005.D Y1117.M Wed Nov 18 07:42:36 2015

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y005.D
 Acq On : 17 Nov 15 13:34
 Sample : 20ug/ml SVOC 11/06/15
 Misc :

Vial: 5
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:31 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)

Title : EPA 8270C

Last Update : Wed Nov 18 07:31:31 2015

Response via : Initial Calibration

DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.41	142	571510	21.72493	ppb	99
39) 1-Methylnaphthalene	7.53	142	568990	21.72438	ppb	99
41) Hexachlorocyclopentadiene	7.59	237	115413	18.81701	ppb	99
42) 1,2,4,5-Tetrachlorobenzene	7.60	216	246157	22.33058	ppb	97
43) 2,4,6-Trichlorophenol	7.75	196	168202	22.10002	ppb	100
44) 2,4,5-Trichlorophenol	7.80	196	180995	21.97220	ppb	92
46) 1,1'-Biphenyl	7.95	154	717254	22.27974	ppb	97
47) 2-Chloronaphthalene	7.97	162	537676	22.34231	ppb	96
48) 2-Nitroaniline	8.10	65	158713	22.53560	ppb	89
49) Dimethyl phthalate	8.32	163	612952	22.10202	ppb	98
50) 2,6-DNT	8.39	165	142295	22.05954	ppb	87
51) Acenaphthylene	8.45	152	912499	22.10473	ppb	99
52) 3-Nitroaniline	8.58	138	161604	23.39259	ppb	91
53) Acenaphthene	8.66	154	541088	22.41408	ppb	99
54) 2,4-Dinitrophenol	8.71	184	64548	18.74177	ppb	94
55) 4-Nitrophenol	8.80	65	100399	19.62712	ppb	81
56) Dibenzofuran	8.86	168	780210	22.47141	ppb	96
57) 2,4-DNT	8.85	165	199937	22.19404	ppb	94
58) 2,3,4,6-Tetrachlorophenol	9.01	232	137750	21.86580	ppb	95
59) Diethyl phthalate	9.14	149	619732	22.25449	ppb	97
60) 4-Chlorophenyl phenyl ethe	9.26	204	304981	22.51934	ppb	94
61) Fluorene	9.26	166	653866	22.41375	ppb	100
62) 4-Nitroaniline	9.30	138	167956	23.73430	ppb	91
65) 4,6-Dinitro-2-methylphenol	9.33	198	116984	20.65708	ppb	93
66) Diphenyl amine	9.41	169	1032989	44.66347	ppb	99
67) n-Nitrosodiphenylamine	9.41	169	1032989	44.66347	ppb	99
68) 1,2-Diphenylhydrazine	9.45	77	606579	21.55972	ppb	92
69) 4-Bromophenyl phenyl ether	9.84	248	165844	22.00139	ppb	91
70) Hexachlorobenzene	9.89	284	170683	21.90298	ppb	# 79
71) Atrazine	10.03	200	81673	10.79079	ppb	99
72) Pentachlorophenol	10.13	266	90799	20.33796	ppb	97
73) Phenanthrene	10.39	178	958308	22.40408	ppb	100
74) Anthracene	10.44	178	994487	22.42294	ppb	100
75) Carbazol	10.64	167	865015	22.10273	ppb	97
76) Di-n-butylphthalate	11.04	149	1052192	22.28661	ppb	98
77) Fluoranthene	11.77	202	994974	22.32985	ppb	# 94
79) Benzidine	11.95	184	312615	24.91160	ppb	98
80) Pyrene	12.04	202	1024218	21.49126	ppb	100
82) Butyl benzylphthalate	12.80	149	448432	21.22562	ppb	96
83) 3,3'-Dichlorobenzidine	13.41	252	295831	23.29333	ppb	# 97
84) Benz (a) anthracene	13.43	228	961610	21.64762	ppb	99
85) Bis (2-ethylhexyl) phthalate	13.47	149	669742	21.40030	ppb	99
86) Chrysene	13.48	228	920668	20.85019	ppb	98
87) Di-n-octylphthalate	14.19	149	1082027	20.81580	ppb	# 93
89) Benzo (b) fluoranthene	14.68	252	887177	21.19863	ppb	99
90) Benzo (k) fluoranthene	14.72	252	853320	21.86498	ppb	99
91) Benzo (a) pyrene	15.12	252	804619	21.18519	ppb	99
92) Indeno (1,2,3-cd) pyrene	16.93	276	951580	21.50111	ppb	99
93) Dibenz (a,h) anthracene	16.96	278	811104	21.02114	ppb	98
94) Benzo (g,h,i) perylene	17.44	276	808007	21.57835	ppb	97

(#) = qualifier out of range (m) = manual integration
 1117Y005.D Y1117.M Wed Nov 18 07:42:37 2015

Quantitation Report

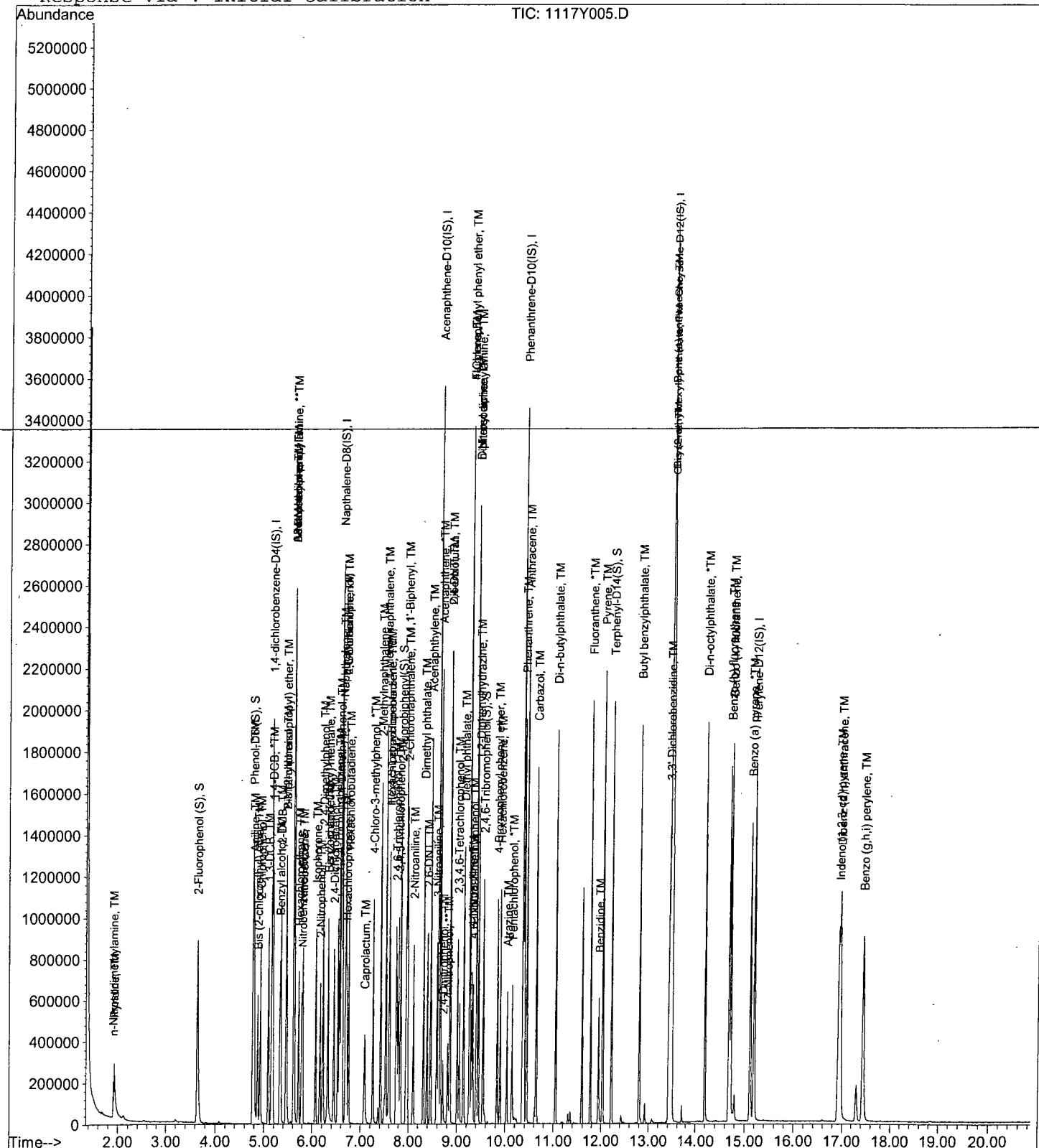
Data File : M:\YODA\DATA\Y151117\1117Y005.D
 Acq On : 17 Nov 15 13:34
 Sample : 20ug/ml SVOC 11/06/15
 Misc :

Vial: 5
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:31 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y006.D Vial: 6
 Acq On : 17 Nov 15 14:03 Operator: MA
 Sample : 40ug/ml SVOC 11/06/15 Inst : Yoda
 Misc :

Quant Time: Nov 18 7:32 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:31:31 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	385809	40.00000	ppb	0.00
20) Naphthalene-D8 (IS)	6.60	136	1642887	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	924636	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.36	188	1696334	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.45	240	1528335	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.20	264	916052	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.65	112	1026534	83.22478	ppb	0.00
Spiked Amount 200.000			Recovery	=	41.613%	
5) Phenol-D6 (S)	4.77	99	1280711	82.03647	ppb	0.00
Spiked Amount 200.000			Recovery	=	41.018%	
21) Nitrobenzene-D5 (S)	5.79	82	578319	43.55812	ppb	0.00
Spiked Amount 100.000			Recovery	=	43.558%	
45) 2-Fluorobiphenyl(S)	7.84	172	1192041	44.32859	ppb	0.00
Spiked Amount 100.000			Recovery	=	44.329%	
63) 2,4,6-Tribromophenol(S)	9.55	330	293361	89.58601	ppb	0.00
Spiked Amount 200.000			Recovery	=	44.793%	
81) Terphenyl-D14(S)	12.22	244	1471498	42.93643	ppb	0.00
Spiked Amount 100.000			Recovery	=	42.936%	

Target Compounds				Qvalue
2) n-Nitrosodimethylamine	1.91	42	129475	38.58699 ppb
3) Pyridine	1.93	79	368692	45.19950 ppb
6) Phenol	4.79	94	786407	42.95677 ppb
7) Aniline	4.80	93	737427	68.70405 ppb
8) Bis (2-chloroethyl) ether	4.88	93	558916	39.21138 ppb
9) 2-Chlorophenol	4.93	128	600753	41.76273 ppb
10) 1,3-DCB	5.09	146	650402	41.90026 ppb
11) 1,4-DCB	5.18	146	661857	41.68857 ppb
12) Benzyl alcohol	5.33	108	348186	50.22549 ppb
13) 1,2-DCB	5.34	146	610904	41.23880 ppb
14) 2-Methylphenol	5.46	107	487298	41.16608 ppb
15) Bis (2-chloroisopropyl) et	5.47	45	632198	41.84708 ppb
16) Acetophenone	5.62	105	732762	40.91971 ppb
17) 3&4-Methylphenol	5.63	107	1303415	81.50527 ppb
18) n-Nitrosodi-n-propylamine	5.62	70	415412	40.74984 ppb
19) Hexachloroethane	5.73	117	230734	41.70310 ppb
22) Nitrobenzene	5.81	77	614085	43.12854 ppb
23) Isophorone	6.08	82	1086212	43.53240 ppb
24) 2-Nitrophenol	6.17	139	339141	44.18604 ppb
25) 2,4-Dimethylphenol	6.23	122	517164	43.26313 ppb
26) Benzoic acid	6.36	105	366616	49.42030 ppb
27) Bis (2-chloroethoxy) metha	6.33	93	639978	43.81020 ppb
28) 2,4-Dichlorophenol	6.45	162	474446	43.64016 ppb
29) 1,2,4-Trichlorobenzene	6.53	180	520528	43.23532 ppb
30) 3,4-Dimethylphenol	6.56	107	772367	42.68261 ppb
31) Naphthalene	6.62	128	1779822	42.81932 ppb
32) 4-Chloroaniline	6.69	127	669290	44.68468 ppb
33) 2,6-Dichlorophenol	6.70	162	473962	43.13964 ppb
34) Hexachloropropene	6.72	213	347658	43.27055 ppb
35) Hexachlorobutadiene	6.76	225	279746	43.05129 ppb
36) Caprolactum	7.11	55	228431	44.36246 ppb
37) 4-Chloro-3-methylphenol	7.26	107	527329	44.01482 ppb

(#= qualifier out of range (m)= manual integration

1117Y006.D Y1117.M Wed Nov 18 07:42:41 2015

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y006.D Vial: 6
 Acq On : 17 Nov 15 14:03 Operator: MA
 Sample : 40ug/ml SVOC 11/06/15 Inst : Yoda
 Misc : Multiplr: 1.00

Quant Time: Nov 18 7:32 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:31:31 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.41	142	1146477	42.04240	ppb	98
39) 1-Methylnaphthalene	7.53	142	1160670	42.75030	ppb	100
41) Hexachlorocyclopentadiene	7.59	237	279549	39.33397	ppb	99
42) 1,2,4,5-Tetrachlorobenzene	7.61	216	503815	44.22353	ppb	100
43) 2,4,6-Trichlorophenol	7.75	196	356721	45.35078	ppb	98
44) 2,4,5-Trichlorophenol	7.80	196	377771	44.37415	ppb	# 89
46) 1,1'-Biphenyl	7.95	154	1454497	43.71640	ppb	99
47) 2-Chloronaphthalene	7.98	162	1102078	44.31127	ppb	99
48) 2-Nitroaniline	8.11	65	329148	45.22123	ppb	93
49) Dimethyl phthalate	8.32	163	1276066	44.52185	ppb	98
50) 2,6-DNT	8.39	165	299517	44.92859	ppb	# 70
51) Acenaphthylene	8.45	152	1851063	43.38788	ppb	99
52) 3-Nitroaniline	8.58	138	331269	46.39825	ppb	86
53) Acenaphthene	8.66	154	1098322	44.02275	ppb	100
54) 2,4-Dinitrophenol	8.71	184	163957	39.18384	ppb	92
55) 4-Nitrophenol	8.81	65	221157	41.83331	ppb	96
56) Dibenzofuran	8.86	168	1577451	43.96117	ppb	99
57) 2,4-DNT	8.86	165	420172	45.12995	ppb	91
58) 2,3,4,6-Tetrachlorophenol	9.01	232	288423	44.29943	ppb	98
59) Diethyl phthalate	9.14	149	1263567	43.90424	ppb	99
60) 4-Chlorophenyl phenyl ethe	9.26	204	616500	44.04641	ppb	99
61) Fluorene	9.26	166	1338275	44.38801	ppb	100
62) 4-Nitroaniline	9.31	138	322387	44.08115	ppb	91
65) 4,6-Dinitro-2-methylphenol	9.34	198	258247	41.86276	ppb	83
66) Diphenyl amine	9.41	169	2109229	88.96417	ppb	100
67) n-Nitrosodiphenylamine	9.41	169	2109229	88.96417	ppb	100
68) 1,2-Diphenylhydrazine	9.45	77	1233864	42.78166	ppb	98
69) 4-Bromophenyl phenyl ether	9.84	248	341278	44.16653	ppb	94
70) Hexachlorobenzene	9.90	284	350096	43.82629	ppb	98
71) Atrazine	10.04	200	167618	21.60380	ppb	99
72) Pentachlorophenol	10.14	266	205330	44.86559	ppb	98
73) Phenanthrene	10.39	178	1940590	44.25787	ppb	100
74) Anthracene	10.44	178	2010319	44.21740	ppb	99
75) Carbazol	10.65	167	1778384	44.32845	ppb	99
76) Di-n-butylphthalate	11.05	149	2149400	44.41207	ppb	100
77) Fluoranthene	11.78	202	2044953	44.77051	ppb	99
79) Benzidine	11.95	184	676002	51.91082	ppb	99
80) Pyrene	12.04	202	2099788	43.13945	ppb	99
82) Butyl benzylphthalate	12.80	149	953438	44.18612	ppb	98
83) 3,3'-Dichlorobenzidine	13.41	252	603051	46.49130	ppb	# 96
84) Benz (a) anthracene	13.44	228	1947455	42.92481	ppb	100
85) Bis (2-ethylhexyl) phthalate	13.47	149	1395688	43.66469	ppb	99
86) Chrysene	13.49	228	1916639	42.49883	ppb	99
87) Di-n-octylphthalate	14.20	149	2292061	43.17286	ppb	99
89) Benzo (b) fluoranthene	14.69	252	1969185	45.91460	ppb	100
90) Benzo (k) fluoranthene	14.73	252	1633375	40.84040	ppb	99
91) Benzo (a) pyrene	15.12	252	1705185	43.81072	ppb	# 96
92) Indeno (1,2,3-cd) pyrene	16.94	276	1970694	43.45118	ppb	99
93) Dibenz (a,h) anthracene	16.98	278	1705599	43.13438	ppb	97
94) Benzo (g,h,i) perylene	17.46	276	1660265	43.26606	ppb	98

(#) = qualifier out of range (m) = manual integration
 1117Y006.D Y1117.M Wed Nov 18 07:42:43 2015

Quantitation Report

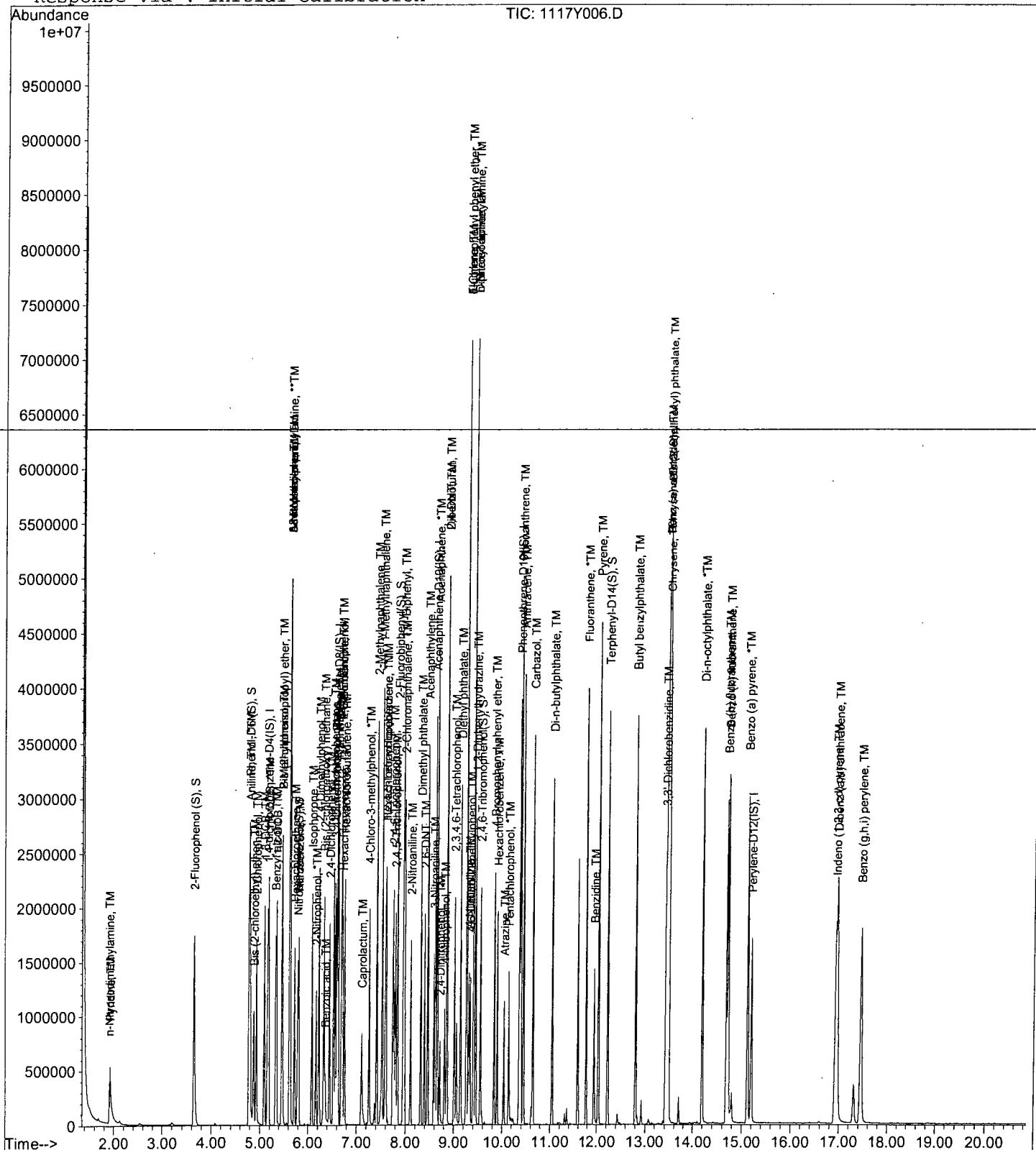
Data File : M:\YODA\DATA\Y151117\1117Y006.D
 Acq On : 17 Nov 15 14:03
 Sample : 40ug/ml SVOC 11/06/15
 Misc :

Vial: 6
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:32 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y007.D
 Acq On : 17 Nov 15 14:32
 Sample : 50ug/ml SVOC 11/06/15
 Misc :

Vial: 7
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:32 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:31:31 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	382841	40.00000	ppb	0.00
20) Naphthalene-D8 (IS)	6.60	136	1669018	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	926811	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.36	188	1710978	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.45	240	1559669	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.20	264	923240	40.00000	ppb	0.00

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.65	112	1319365	107.79490	ppb	0.00
Spiked Amount 200.000				Recovery =	53.898%	
5) Phenol-D6 (S)	4.78	99	1670297	107.82102	ppb	0.00
Spiked Amount 200.000				Recovery =	53.910%	
21) Nitrobenzene-D5 (S)	5.79	82	747574	55.42460	ppb	0.00
Spiked Amount 100.000				Recovery =	55.425%	
45) 2-Fluorobiphenyl(S)	7.84	172	1564163	58.03023	ppb	0.00
Spiked Amount 100.000				Recovery =	58.030%	
63) 2,4,6-Tribromophenol(S)	9.55	330	383528	116.84618	ppb	0.00
Spiked Amount 200.000				Recovery =	58.423%	
81) Terphenyl-D14 (S)	12.22	244	1918985	54.86861	ppb	0.00
Spiked Amount 100.000				Recovery =	54.869%	

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Value
2) n-Nitrosodimethylamine	1.91	42	174446	52.39259	ppb	100
3) Pyridine	1.93	79	448243	55.37801	ppb	100
6) Phenol	4.79	94	1014821	55.86343	ppb	100
7) Aniline	4.80	93	931367	87.44562	ppb	100
8) Bis (2-chloroethyl) ether	4.88	93	722905	51.10939	ppb	100
9) 2-Chlorophenol	4.93	128	761103	53.32002	ppb	100
10) 1,3-DCB	5.09	146	821979	53.36414	ppb	100
11) 1,4-DCB	5.18	146	843257	53.52624	ppb	100
12) Benzyl alcohol	5.33	108	456239	66.32224	ppb	100
13) 1,2-DCB	5.34	146	787591	53.57815	ppb	100
14) 2-Methylphenol	5.47	107	622146	52.96526	ppb	100
15) Bis (2-chloroisopropyl) et	5.47	45	809375	53.99030	ppb	100
16) Acetophenone	5.62	105	935935	52.67072	ppb	100
17) 3&4-Methylphenol	5.64	107	1677621	105.71843	ppb	100
18) n-Nitrosodi-n-propylamine	5.62	70	529449	52.33895	ppb	100
19) Hexachloroethane	5.73	117	296500	54.00518	ppb	100
22) Nitrobenzene	5.81	77	792805	54.80868	ppb	100
23) Isophorone	6.09	82	1388129	54.76140	ppb	100
24) 2-Nitrophenol	6.17	139	437357	56.09027	ppb	100
25) 2,4-Dimethylphenol	6.23	122	665338	54.78715	ppb	100
26) Benzoic acid	6.37	105	498941	64.15715	ppb	100
27) Bis (2-chloroethoxy) metha	6.33	93	812215	54.73030	ppb	100
28) 2,4-Dichlorophenol	6.45	162	606704	54.93170	ppb	100
29) 1,2,4-Trichlorobenzene	6.53	180	674812	55.17268	ppb	100
30) 3,4-Dimethylphenol	6.57	107	985007	53.58130	ppb	100
31) Naphthalene	6.63	128	2330889	55.19903	ppb	100
32) 4-Chloroaniline	6.69	127	864484	55.88426	ppb	100
33) 2,6-Dichlorophenol	6.70	162	617014	55.28084	ppb	100
34) Hexachloropropene	6.72	213	455868	55.85036	ppb	100
35) Hexachlorobutadiene	6.76	225	366825	55.56839	ppb	100
36) Caprolactum	7.12	55	291256	55.67781	ppb	100
37) 4-Chloro-3-methylphenol	7.27	107	678203	55.72162	ppb	100

(#= qualifier out of range (m)= manual integration

1117Y007.D Y1117.M Wed Nov 18 07:42:48 2015

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y007.D

Acq On : 17 Nov 15 14:32

Sample : 50ug/ml SVOC 11/06/15

Misc :

Vial: 7

Operator: MA

Inst : Yoda

Multiplr: 1.00

Quant Time: Nov 18 7:32 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)

Title : EPA 8270C

Last Update : Wed Nov 18 07:31:31 2015

Response via : Initial Calibration

DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.41	142	1520591	54.88848	ppb	100
39) 1-Methylnaphthalene	7.53	142	1492126	54.09817	ppb	100
41) Hexachlorocyclopentadiene	7.59	237	381519	52.27295	ppb	100
42) 1,2,4,5-Tetrachlorobenzene	7.61	216	660713	57.85952	ppb	100
43) 2,4,6-Trichlorophenol	7.75	196	451604	57.27874	ppb	100
44) 2,4,5-Trichlorophenol	7.80	196	488194	57.21021	ppb	100
46) 1,1'-Biphenyl	7.95	154	1881927	56.43051	ppb	100
47) 2-Chloronaphthalene	7.98	162	1431349	57.41522	ppb	100
48) 2-Nitroaniline	8.11	65	423268	58.01579	ppb	100
49) Dimethyl phthalate	8.32	163	1641473	57.13647	ppb	100
50) 2,6-DNT	8.40	165	389904	58.34971	ppb	100
51) Acenaphthylene	8.46	152	2462856	57.59249	ppb	100
52) 3-Nitroaniline	8.59	138	434235	60.67716	ppb	100
53) Acenaphthene	8.66	154	1399276	55.95392	ppb	100
54) 2,4-Dinitrophenol	8.71	184	222846	51.45277	ppb	100
55) 4-Nitrophenol	8.81	65	286790	54.12093	ppb	100
56) Dibenzofuran	8.86	168	2037026	56.63561	ppb	100
57) 2,4-DNT	8.86	165	535948	57.43016	ppb	100
58) 2,3,4,6-Tetrachlorophenol	9.01	232	379950	58.22028	ppb	100
59) Diethyl phthalate	9.14	149	1621181	56.19780	ppb	100
60) 4-Chlorophenyl phenyl ethe	9.26	204	798072	56.88518	ppb	100
61) Fluorene	9.26	166	1712486	56.66657	ppb	100
62) 4-Nitroaniline	9.31	138	413799	56.44746	ppb	100
65) 4,6-Dinitro-2-methylphenol	9.34	198	339398	53.85798	ppb	100
66) Diphenyl amine	9.41	169	2736260	114.42363	ppb	100
67) n-Nitrosodiphenylamine	9.41	169	2736260	114.42363	ppb	100
68) 1,2-Diphenylhydrazine	9.45	77	1603205	55.11202	ppb	100
69) 4-Bromophenyl phenyl ether	9.84	248	442816	56.81660	ppb	100
70) Hexachlorobenzene	9.90	284	462956	57.45849	ppb	100
71) Atrazine	10.04	200	216261	27.63470	ppb	100
72) Pentachlorophenol	10.14	266	273456	59.24005	ppb	100
73) Phenanthrene	10.39	178	2517226	56.91751	ppb	100
74) Anthracene	10.45	178	2603681	56.77837	ppb	100
75) Carbazol	10.65	167	2293767	56.68566	ppb	100
76) Di-n-butylphthalate	11.05	149	2810077	57.56638	ppb	100
77) Fluoranthene	11.78	202	2595100	56.32870	ppb	100
79) Benzidine	11.94	184	892302	66.92537	ppb	100
80) Pyrene	12.04	202	2714895	54.65606	ppb	100
82) Butyl benzylphthalate	12.80	149	1210148	54.95637	ppb	100
83) 3,3'-Dichlorobenzidine	13.42	252	782666	59.12623	ppb	100
84) Benz (a) anthracene	13.44	228	2507593	54.16068	ppb	100
85) Bis (2-ethylhexyl) phthala	13.47	149	1822608	55.87551	ppb	100
86) Chrysene	13.49	228	2546876	55.33890	ppb	100
87) Di-n-octylphthalate	14.20	149	2993872	55.25912	ppb	100
89) Benzo (b) fluoranthene	14.69	252	2509314	58.05302	ppb	100
90) Benzo (k) fluoranthene	14.73	252	2155732	53.48160	ppb	100
91) Benzo (a) pyrene	15.13	252	2208211	56.29308	ppb	100
92) Indeno (1,2,3-cd) pyrene	16.94	276	2538305	55.53052	ppb	100
93) Dibenz (a,h) anthracene	16.98	278	2216565	55.62021	ppb	100
94) Benzo (g,h,i) perylene	17.47	276	2135879	55.22708	ppb	100

Quantitation Report

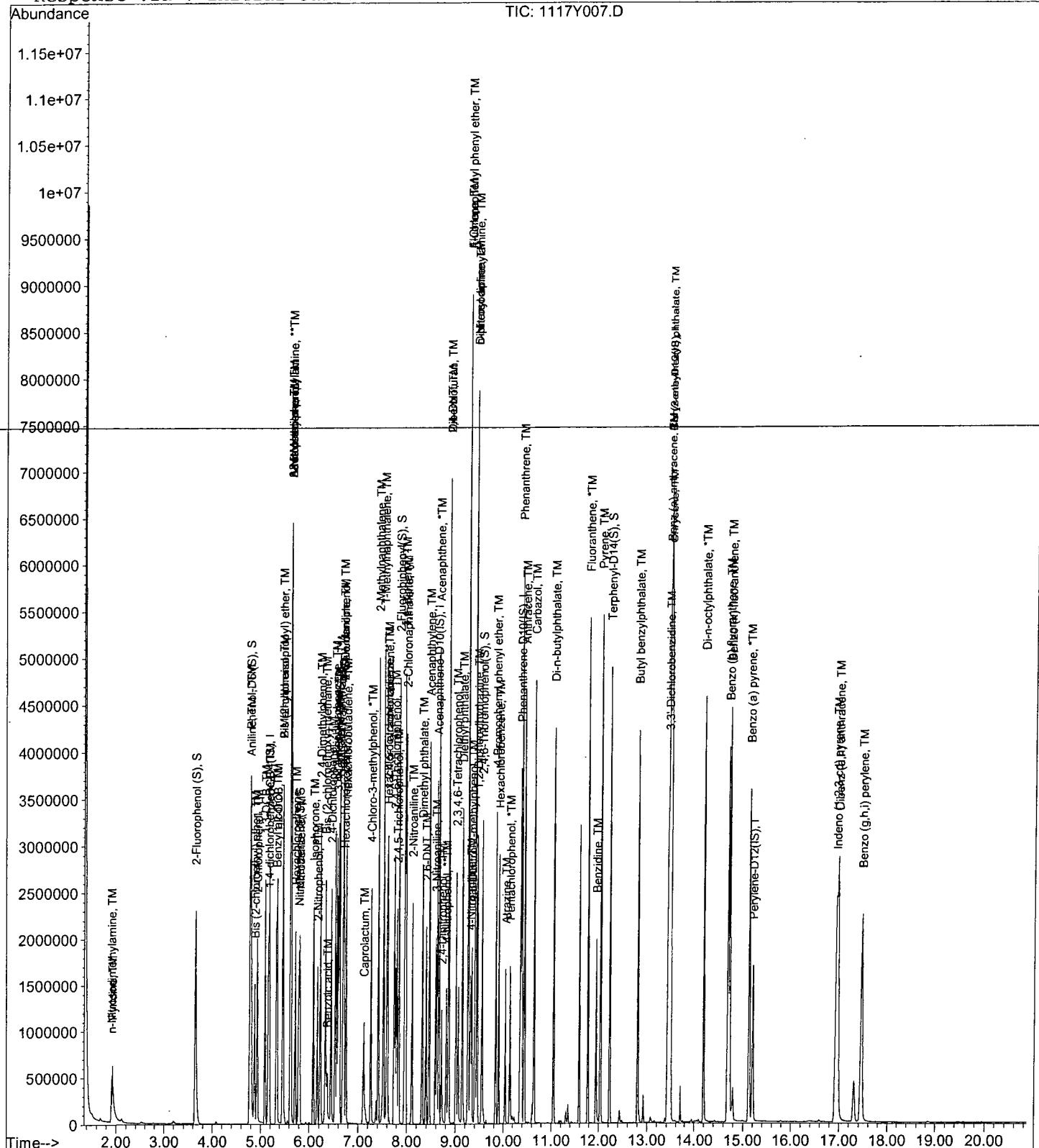
Data File : M:\YODA\DATA\Y151117\1117Y007.D
 Acq On : 17 Nov 15 14:32
 Sample : 50ug/ml SVOC 11/06/15
 Misc :

Vial: 7
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:32 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y008.D
 Acq On : 17 Nov 15 15:01
 Sample : 60ug/ml SVOC 11/06/15
 Misc :

Vial: 8
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:32 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:31:31 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	373904	40.00000	ppb	0.00
20) Naphthalene-D8 (IS)	6.60	136	1641166	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	931230	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.36	188	1724153	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.46	240	1561605	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.20	264	925624	40.00000	ppb	0.00

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.65	112	1578375	132.03886	ppb	0.00
Spiked Amount	200.000			Recovery	= 66.019%	
5) Phenol-D6 (S)	4.78	99	1992644	131.70364	ppb	0.00
Spiked Amount	200.000			Recovery	= 65.852%	
21) Nitrobenzene-D5 (S)	5.79	82	891425	67.21120	ppb	0.00
Spiked Amount	100.000			Recovery	= 67.211%	
45) 2-Fluorobiphenyl (S)	7.84	172	1850023	68.30990	ppb	0.00
Spiked Amount	100.000			Recovery	= 68.310%	
63) 2,4,6-Tribromophenol (S)	9.55	330	478477	145.08173	ppb	0.00
Spiked Amount	200.000			Recovery	= 72.541%	
81) Terphenyl-D14 (S)	12.22	244	2353616	67.21237	ppb	0.00
Spiked Amount	100.000			Recovery	= 67.212%	

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) n-Nitrosodimethylamine	1.91	42	216675	66.63095	ppb	99
3) Pyridine	1.93	79	539571	68.25442	ppb	98
6) Phenol	4.80	94	1207394	68.05272	ppb	85
7) Aniline	4.81	93	1101288	105.87087	ppb	# 73
8) Bis (2-chloroethyl) ether	4.88	93	855200	61.90781	ppb	98
9) 2-Chlorophenol	4.94	128	919461	65.95360	ppb	92
10) 1,3-DCB	5.09	146	1002698	66.65262	ppb	100
11) 1,4-DCB	5.18	146	1019982	66.29147	ppb	99
12) Benzyl alcohol	5.34	108	544582	81.05661	ppb	91
13) 1,2-DCB	5.34	146	948567	66.07137	ppb	100
14) 2-Methylphenol	5.47	107	759812	66.23130	ppb	99
15) Bis (2-chloroisopropyl) et	5.47	45	966654	66.02301	ppb	96
16) Acetophenone	5.62	105	1133442	65.31022	ppb	98
17) 3&4-Methylphenol	5.64	107	2040487	131.65854	ppb	98
18) n-Nitrosodi-n-propylamine	5.63	70	645954	65.38238	ppb	93
19) Hexachloroethane	5.73	117	358339	66.82872	ppb	96
22) Nitrobenzene	5.82	77	959192	67.43681	ppb	91
23) Isophorone	6.09	82	1679837	67.39386	ppb	98
24) 2-Nitrophenol	6.17	139	533493	69.58068	ppb	99
25) 2,4-Dimethylphenol	6.23	122	810247	67.85194	ppb	100
26) Benzoic acid	6.38	105	612057	78.54558	ppb	98
27) Bis (2-chloroethoxy) metha	6.33	93	979907	67.15065	ppb	99
28) 2,4-Dichlorophenol	6.45	162	737353	67.89380	ppb	99
29) 1,2,4-Trichlorobenzene	6.53	180	811936	67.51054	ppb	99
30) 3,4-Dimethylphenol	6.57	107	1200139	66.39173	ppb	96
31) Naphthalene	6.63	128	2820821	67.93505	ppb	100
32) 4-Chloroaniline	6.70	127	1029623	66.96635	ppb	# 93
33) 2,6-Dichlorophenol	6.70	162	741295	67.54282	ppb	99
34) Hexachloropropene	6.72	213	550066	68.53465	ppb	99
35) Hexachlorobutadiene	6.76	225	435329	67.06486	ppb	99
36) Caprolactum	7.13	55	351239	68.28393	ppb	98
37) 4-Chloro-3-methylphenol	7.27	107	817832	68.33396	ppb	98

(#= qualifier out of range (m)= manual integration

1117Y008.D Y1117.M Wed Nov 18 07:42:53 2015

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y008.D
 Acq On : 17 Nov 15 15:01
 Sample : 60ug/ml SVOC 11/06/15
 Misc :

Vial: 8
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:32 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:31:31 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.41	142	1832717	67.27794	ppb	100 ~
39) 1-Methylnaphthalene	7.53	142	1808265	66.67264	ppb	100
41) Hexachlorocyclopentadiene	7.59	237	476635	64.13170	ppb	100
42) 1,2,4,5-Tetrachlorobenzene	7.61	216	790184	68.86910	ppb	99
43) 2,4,6-Trichlorophenol	7.75	196	557992	70.43651	ppb	99
44) 2,4,5-Trichlorophenol	7.80	196	599033	69.86603	ppb	97
46) 1,1'-Biphenyl	7.96	154	2301147	68.67360	ppb	97
47) 2-Chloronaphthalene	7.98	162	1738905	69.42111	ppb	98
48) 2-Nitroaniline	8.11	65	517723	70.62565	ppb	97
49) Dimethyl phthalate	8.32	163	1996202	69.15417	ppb	100
50) 2,6-DNT	8.40	165	476798	71.01492	ppb	92
51) Acenaphthylene	8.46	152	2947497	68.59847	ppb	100
52) 3-Nitroaniline	8.59	138	514916	71.60956	ppb	92
53) Acenaphthene	8.66	154	1733536	68.99128	ppb	100
54) 2,4-Dinitrophenol	8.71	184	287113	64.64471	ppb	96
55) 4-Nitrophenol	8.81	65	353380	66.37085	ppb	90
56) Dibenzofuran	8.86	168	2485013	68.76317	ppb	100
57) 2,4-DNT	8.86	165	658277	70.20375	ppb	91
58) 2,3,4,6-Tetrachlorophenol	9.01	232	471259	71.86902	ppb	99
59) Diethyl phthalate	9.15	149	1999503	68.98333	ppb	97
60) 4-Chlorophenyl phenyl ethe	9.27	204	989302	70.18110	ppb	85
61) Fluorene	9.26	166	2091689	68.88604	ppb	100
62) 4-Nitroaniline	9.32	138	485701	65.94141	ppb	93
65) 4,6-Dinitro-2-methylphenol	9.35	198	423243	66.10995	ppb	# 77
66) Diphenyl amine	9.42	169	3370928	139.88671	ppb	100
67) n-Nitrosodiphenylamine	9.42	169	3370928	139.88671	ppb	100
68) 1,2-Diphenylhydrazine	9.46	77	1937690	66.10133	ppb	# 85
69) 4-Bromophenyl phenyl ether	9.84	248	544962	69.38838	ppb	98
70) Hexachlorobenzene	9.90	284	560365	69.01669	ppb	95
71) Atrazine	10.04	200	266841	33.83745	ppb	98
72) Pentachlorophenol	10.14	266	340186	73.13294	ppb	99
73) Phenanthrene	10.39	178	3068869	68.86057	ppb	100
74) Anthracene	10.45	178	3251608	70.36585	ppb	100
75) Carbazol	10.65	167	2797295	68.60106	ppb	100
76) Di-n-butylphthalate	11.05	149	3381286	68.73869	ppb	100
77) Fluoranthene	11.78	202	3171880	68.32207	ppb	99
79) Benzidine	11.95	184	1094487	81.82033	ppb	100
80) Pyrene	12.05	202	3368220	67.72469	ppb	98
82) Butyl benzylphthalate	12.81	149	1511432	68.55347	ppb	78
83) 3,3'-Dichlorobenzidine	13.42	252	954354	72.00696	ppb	99
84) Benz (a) anthracene	13.44	228	3076254	66.36062	ppb	100
85) Bis (2-ethylhexyl) phthala	13.47	149	2247496	68.81583	ppb	97
86) Chrysene	13.49	228	3073615	66.70117	ppb	99
87) Di-n-octylphthalate	14.20	149	3733971	68.83399	ppb	100
89) Benzo (b) fluoranthene	14.69	252	2981020	68.78833	ppb	99
90) Benzo (k) fluoranthene	14.73	252	2743252	67.88211	ppb	99
91) Benzo (a) pyrene	15.13	252	2710130	68.91037	ppb	98
92) Indeno (1,2,3-cd) pyrene	16.95	276	3128536	68.26673	ppb	99
93) Dibenz (a,h) anthracene	16.99	278	2732845	68.39859	ppb	98
94) Benzo (g,h,i) perylene	17.48	276	2605721	67.20218	ppb	96

(#) = qualifier out of range (m) = manual integration
 1117Y008.D Y1117.M Wed Nov 18 07:42:54 2015

Quantitation Report

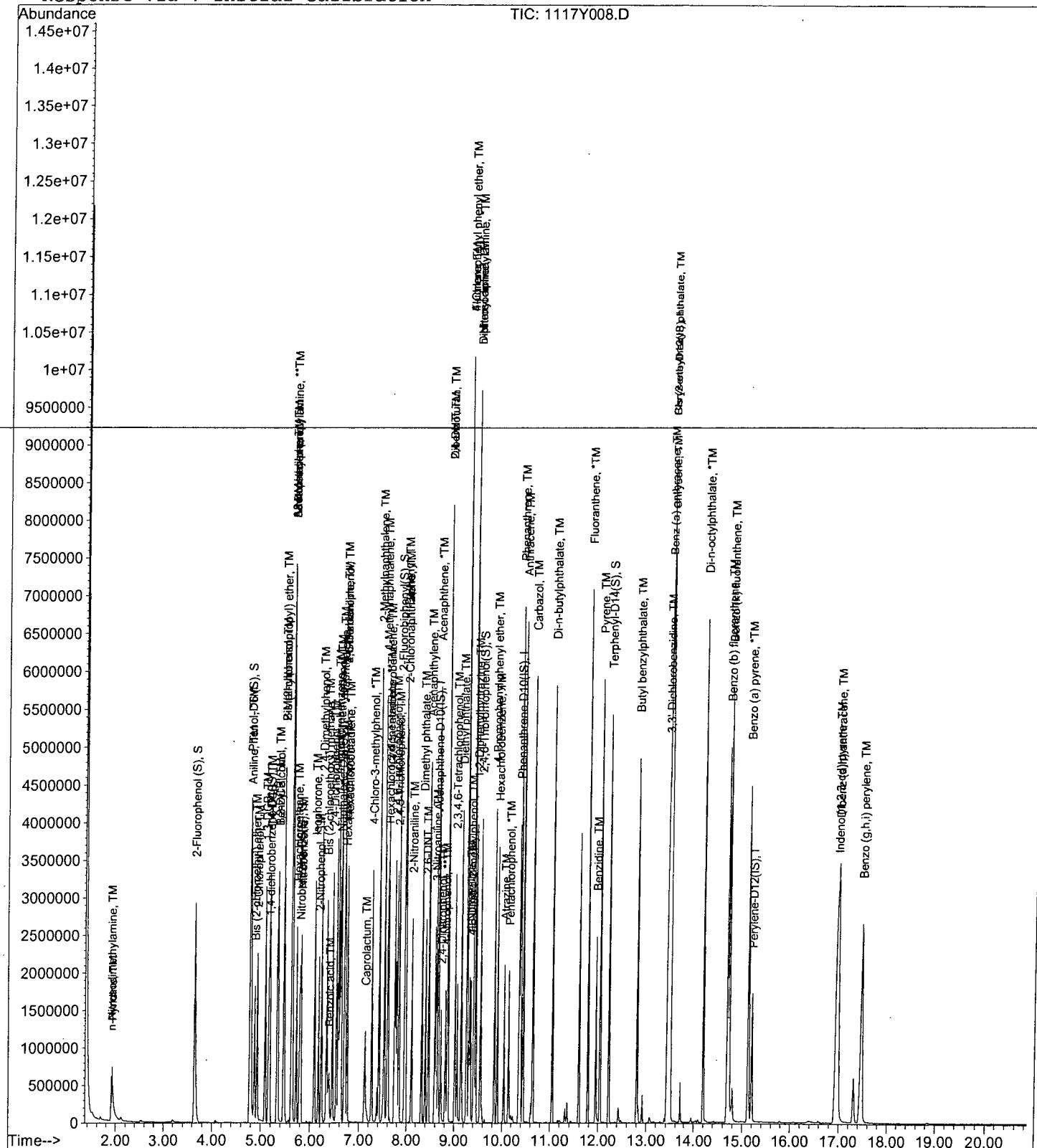
Data File : M:\YODA\DATA\Y151117\1117Y008.D
 Acq On : 17 Nov 15 15:01
 Sample : 60ug/ml SVOC 11/06/15
 Misc :

Vial: 8
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:32 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y009.D
 Acq On : 17 Nov 15 15:30
 Sample : 80ug/ml SVOC 11/06/15
 Misc :

Vial: 9
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:32 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)

Title : EPA 8270C

Last Update : Wed Nov 18 07:31:31 2015

Response via : Initial Calibration

DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc Units	Dev (Min)
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1) 1,4-dichlorobenzene-D4 (IS)	5.17	152	383989	40.00000 ppb	0.00
20) Naphthalene-D8 (IS)	6.60	136	1648575	40.00000 ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	926686	40.00000 ppb	0.00
64) Phenanthrene-D10 (IS)	10.36	188	1704298	40.00000 ppb	0.00
78) Chrysene-D12 (IS)	13.46	240	1577853	40.00000 ppb	0.00
88) Perylene-D12 (IS)	15.20	264	930599	40.00000 ppb	0.00

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.64	112	2072957	168.85860 ppb	0.00
Spiked Amount 200.000			Recovery =	84.430%	
5) Phenol-D6 (S)	4.79	99	2606899	167.77746 ppb	0.00
Spiked Amount 200.000			Recovery =	83.888%	
21) Nitrobenzene-D5 (S)	5.80	82	1178492	88.45600 ppb	0.00
Spiked Amount 100.000			Recovery =	88.456%	
45) 2-Fluorobiphenyl (S)	7.84	172	2495429	92.59256 ppb	0.00
Spiked Amount 100.000			Recovery =	92.593%	
63) 2,4,6-Tribromophenol (S)	9.56	330	626259	190.82269 ppb	0.00
Spiked Amount 200.000			Recovery =	95.412%	
81) Terphenyl-D14 (S)	12.23	244	3163842	89.41967 ppb	0.00
Spiked Amount 100.000			Recovery =	89.420%	

Target Compounds

				Qvalue	
2) n-Nitrosodimethylamine	1.91	42	283109	84.77390 ppb	98
3) Pyridine	1.93	79	723805	89.15487 ppb	100
6) Phenol	4.80	94	1578966	86.65838 ppb	94
7) Aniline	4.81	93	1371216	128.35795 ppb	95
8) Bis (2-chloroethyl) ether	4.88	93	1083189	76.35251 ppb	97
9) 2-Chlorophenol	4.94	128	1203959	84.09268 ppb	96
10) 1,3-DCB	5.09	146	1320664	85.48320 ppb	98
11) 1,4-DCB	5.19	146	1358311	85.96183 ppb	98
12) Benzyl alcohol	5.33	108	706291	102.36468 ppb	96
13) 1,2-DCB	5.35	146	1261808	85.58150 ppb	96
14) 2-Methylphenol	5.46	107	989478	83.98556 ppb	100
15) Bis (2-chloroisopropyl) et	5.47	45	1265489	84.16353 ppb	# 85
16) Acetophenone	5.63	105	1486961	83.43010 ppb	96
17) 3&4-Methylphenol	5.65	107	2690016	169.00960 ppb	99
18) n-Nitrosodi-n-propylamine	5.63	70	837575	82.55135 ppb	97
19) Hexachloroethane	5.72	117	473912	86.06133 ppb	91
22) Nitrobenzene	5.82	77	1251579	87.59786 ppb	97
23) Isophorone	6.10	82	2197874	87.78085 ppb	100
24) 2-Nitrophenol	6.17	139	695583	90.31351 ppb	91
25) 2,4-Dimethylphenol	6.24	122	1073039	89.45491 ppb	98
26) Benzoic acid	6.40	105	817268	102.42375 ppb	97
27) Bis (2-chloroethoxy) metha	6.33	93	1300078	88.69079 ppb	99
28) 2,4-Dichlorophenol	6.45	162	971407	89.04299 ppb	94
29) 1,2,4-Trichlorobenzene	6.53	180	1083980	89.72528 ppb	98
30) 3,4-Dimethylphenol	6.57	107	1569027	86.40854 ppb	94
31) Naphthalene	6.62	128	3715545	89.08091 ppb	100
32) 4-Chloroaniline	6.70	127	1308590	83.82019 ppb	95
33) 2,6-Dichlorophenol	6.70	162	966757	87.68984 ppb	98
34) Hexachloropropene	6.72	213	731680	90.75288 ppb	98
35) Hexachlorobutadiene	6.76	225	573370	87.93387 ppb	97
36) Caprolactum	7.14	55	459218	88.87477 ppb	97
37) 4-Chloro-3-methylphenol	7.27	107	1084046	90.17040 ppb	89

(#= qualifier out of range (m)= manual integration

1117Y009.D Y1117.M Wed Nov 18 07:42:59 2015

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y009.D Vial: 9
 Acq On : 17 Nov 15 15:30 Operator: MA
 Sample : 80ug/ml SVOC 11/06/15 Inst : Yoda
 Misc : Multiplr: 1.00

Quant Time: Nov 18 7:32 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:31:31 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.41	142	2389671	87.32915	ppb	99
39) 1-Methylnaphthalene	7.53	142	2423540	88.95688	ppb	100
41) Hexachlorocyclopentadiene	7.59	237	656438	87.39517	ppb	99
42) 1,2,4,5-Tetrachlorobenzene	7.61	216	1047414	91.73582	ppb	98
43) 2,4,6-Trichlorophenol	7.75	196	731970	92.85120	ppb	99
44) 2,4,5-Trichlorophenol	7.80	196	784019	91.88958	ppb	# 90
46) 1,1'-Biphenyl	7.96	154	3028123	90.81201	ppb	98
47) 2-Chloronaphthalene	7.98	162	2283714	91.61820	ppb	97
48) 2-Nitroaniline	8.11	65	677388	92.85961	ppb	88
49) Dimethyl phthalate	8.32	163	2589338	90.14195	ppb	99
50) 2,6-DNT	8.40	165	618298	92.54168	ppb	# 74
51) Acenaphthylene	8.46	152	3887540	90.92019	ppb	100
52) 3-Nitroaniline	8.59	138	675733	94.43525	ppb	87
53) Acenaphthene	8.67	154	2243758	89.73497	ppb	99
54) 2,4-Dinitrophenol	8.72	184	394641	87.49167	ppb	90
55) 4-Nitrophenol	8.82	65	462156	87.22649	ppb	99
56) Dibenzofuran	8.86	168	3231591	89.86032	ppb	96
57) 2,4-DNT	8.87	165	871237	93.37106	ppb	86
58) 2,3,4,6-Tetrachlorophenol	9.02	232	610804	93.60699	ppb	93
59) Diethyl phthalate	9.15	149	2602952	90.24280	ppb	99
60) 4-Chlorophenyl phenyl ethe	9.27	204	1294033	92.24885	ppb	88
61) Fluorene	9.27	166	2763448	91.45549	ppb	100
62) 4-Nitroaniline	9.33	138	631033	86.09257	ppb	91
65) 4,6-Dinitro-2-methylphenol	9.35	198	560903	87.85846	ppb	99
66) Diphenyl amine	9.42	169	4340909	182.23758	ppb	99
67) n-Nitrosodiphenylamine	9.42	169	4340909	182.23758	ppb	99
68) 1,2-Diphenylhydrazine	9.46	77	2938379	101.40608	ppb	# 91
69) 4-Bromophenyl phenyl ether	9.84	248	716780	92.32869	ppb	92
70) Hexachlorobenzene	9.90	284	736138	91.72181	ppb	# 85
71) Atrazine	10.05	200	346256	44.41940	ppb	97
72) Pentachlorophenol	10.14	266	453108	98.54363	ppb	99
73) Phenanthrene	10.39	178	4041623	91.74414	ppb	99
74) Anthracene	10.45	178	4176921	91.44297	ppb	100
75) Carbazol	10.64	167	3634366	90.16780	ppb	99
76) Di-n-butylphthalate	11.05	149	4406551	90.62508	ppb	99
77) Fluoranthene	11.78	202	4162284	90.69978	ppb	96
79) Benzidine	11.94	184	1391706	102.77546	ppb	98
80) Pyrene	12.05	202	4355903	86.68210	ppb	99
82) Butyl benzylphthalate	12.81	149	1978950	88.83422	ppb	87
83) 3,3'-Dichlorobenzidine	13.42	252	1183050	88.34312	ppb	# 97
84) Benz (a) anthracene	13.44	228	4121935	88.00231	ppb	99
85) Bis (2-ethylhexyl) phthala	13.47	149	2869667	86.96122	ppb	97
86) Chrysene	13.49	228	3986304	85.61682	ppb	100
87) Di-n-octylphthalate	14.20	149	4796330	87.50759	ppb	96
89) Benzo (b) fluoranthene	14.70	252	3641742	83.58552	ppb	100
90) Benzo (k) fluoranthene	14.74	252	3837147	94.44307	ppb	99
91) Benzo (a) pyrene	15.14	252	3596402	90.95670	ppb	99
92) Indeno (1,2,3-cd) pyrene	16.95	276	4059819	88.11435	ppb	99
93) Dibenz (a,h) anthracene	16.99	278	3585201	89.25195	ppb	98
94) Benzo (g,h,i) perylene	17.49	276	3428562	87.95074	ppb	98

(#= qualifier out of range (m) = manual integration

1117Y009.D Y1117.M Wed Nov 18 07:43:00 2015

Quantitation Report

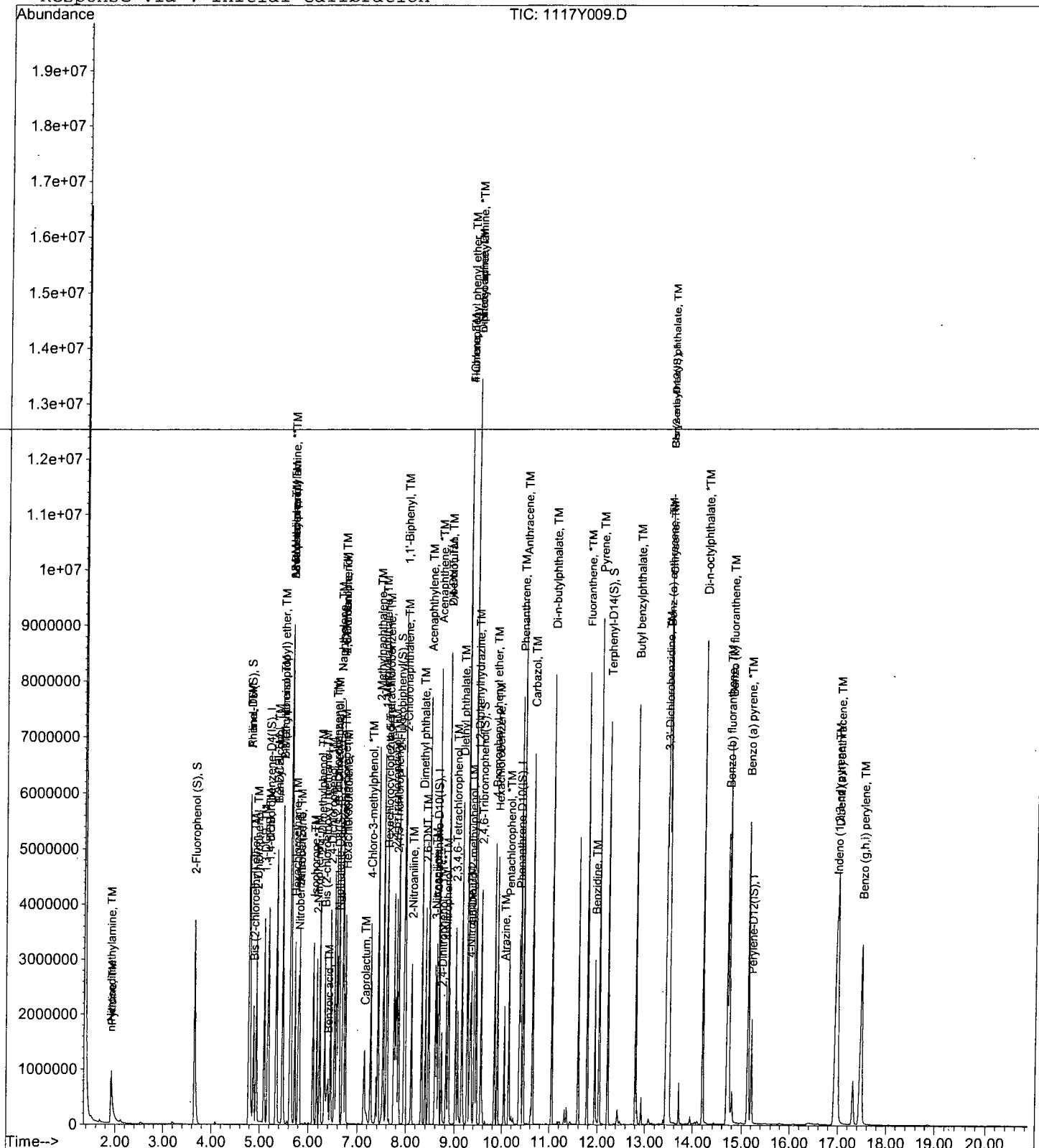
Data File : M:\YODA\DATA\Y151117\1117Y009.D
 Acq On : 17 Nov 15 15:30
 Sample : 80ug/ml SVOC 11/06/15
 Misc :

Vial: 9
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:32 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y010.D Vial: 10
 Acq On : 17 Nov 15 16:00 Operator: MA
 Sample : 100ug/ml SVOC 11/06/15 Inst : Yoda
 Misc : Multiplr: 1.00

Quant Time: Nov 18 7:32 2015 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:31:31 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4(IS)	5.16	152	382072	40.00000	ppb	0.00
20) Naphthalene-D8(IS)	6.60	136	1650645	40.00000	ppb	0.00
40) Acenaphthene-D10(IS)	8.62	164	925207	40.00000	ppb	0.00
64) Phenanthrene-D10(IS)	10.36	188	1687205	40.00000	ppb	0.00
78) Chrysene-D12(IS)	13.46	240	1592164	40.00000	ppb	0.01
88) Perylene-D12(IS)	15.20	264	921348	40.00000	ppb	0.00

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.66	112	2553825	209.07283	ppb	0.01
Spiked Amount 200.000				Recovery = 104.537%		
5) Phenol-D6 (S)	4.79	99	3176626	205.47030	ppb	0.01
Spiked Amount 200.000				Recovery = 102.735%		
21) Nitrobenzene-D5(S)	5.80	82	1438026	107.80091	ppb	0.01
Spiked Amount 100.000				Recovery = 107.801%		
45) 2-Fluorobiphenyl(S)	7.84	172	3036864	112.86257	ppb	0.00
Spiked Amount 100.000				Recovery = 112.863%		
63) 2,4,6-Tribromophenol(S)	9.56	330	787564	240.35633	ppb	0.01
Spiked Amount 200.000				Recovery = 120.178%		
81) Terphenyl-D14(S)	12.23	244	3962351	110.98134	ppb	0.01
Spiked Amount 100.000				Recovery = 110.981%		

Target Compounds

				Qvalue
2) n-Nitrosodimethylamine	1.91	42	368740	110.96917 ppb 100
3) Pyridine	1.93	79	852317	105.51112 ppb 99
6) Phenol	4.81	94	1956808	107.93432 ppb 88
7) Aniline	4.81	93	1570853	147.78352 ppb # 79
8) Bis (2-chloroethyl) ether	4.88	93	1342594	95.11245 ppb 99
9) 2-Chlorophenol	4.94	128	1513656	106.25448 ppb 94
10) 1,3-DCB	5.10	146	1637252	106.50685 ppb 99
11) 1,4-DCB	5.18	146	1685312	107.19149 ppb 98
12) Benzyl alcohol	5.34	108	859093	125.13541 ppb 98
13) 1,2-DCB	5.36	146	1547619	105.49315 ppb 96
14) 2-Methylphenol	5.47	107	1224464	104.45231 ppb 98
15) Bis (2-chloroisopropyl) et	5.48	45	1548190	103.48167 ppb # 81
16) Acetophenone	5.63	105	1839137	103.70766 ppb 99
17) 3&4-Methylphenol	5.65	107	3276733	206.90508 ppb 99
18) n-Nitrosodi-n-propylamine	5.63	70	1022825	101.31538 ppb 98
19) Hexachloroethane	5.73	117	588686	107.44041 ppb 98
22) Nitrobenzene	5.82	77	1545870	108.05957 ppb 97
23) Isophorone	6.10	82	2727102	108.78109 ppb 98
24) 2-Nitrophenol	6.17	139	869596	112.76551 ppb 94
25) 2,4-Dimethylphenol	6.24	122	1314887	109.47933 ppb 98
26) Benzoic acid	6.41	105	1049493	129.65882 ppb 97
27) Bis (2-chloroethoxy) metha	6.33	93	1579128	107.59238 ppb 98
28) 2,4-Dichlorophenol	6.45	162	1198061	109.68126 ppb 94
29) 1,2,4-Trichlorobenzene	6.53	180	1335668	110.41984 ppb 99
30) 3,4-Dimethylphenol	6.57	107	1937143	106.54742 ppb 93
31) Naphthalene	6.63	128	4572573	109.49085 ppb 100
32) 4-Chloroaniline	6.70	127	1554803	98.82745 ppb 95
33) 2,6-Dichlorophenol	6.70	162	1205572	109.21446 ppb 98
34) Hexachloropropene	6.72	213	921362	114.13650 ppb 100
35) Hexachlorobutadiene	6.76	225	728503	111.58546 ppb 99
36) Caprolactum	7.16	55	562449	108.71707 ppb 99
37) 4-Chloro-3-methylphenol	7.28	107	1340641	111.37400 ppb 100

(#) = qualifier out of range (m) = manual integration
 1117Y010.D Y1117.M Wed Nov 18 07:43:05 2015

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y010.D
 Acq On : 17 Nov 15 16:00
 Sample : 100ug/ml SVOC 11/06/15
 Misc :

Vial: 10
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:32 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)

Title : EPA 8270C

Last Update : Wed Nov 18 07:31:31 2015

Response via : Initial Calibration

DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.42	142	2945256	107.49770	ppb	100
39) 1-Methylnaphthalene	7.54	142	2966243	108.74045	ppb	99
41) Hexachlorocyclopentadiene	7.59	237	836553	110.57223	ppb	99
42) 1,2,4,5-Tetrachlorobenzene	7.61	216	1289711	113.13752	ppb	98
43) 2,4,6-Trichlorophenol	7.75	196	915391	116.30398	ppb	98
44) 2,4,5-Trichlorophenol	7.82	196	977326	114.72890	ppb	97
46) 1,1'-Biphenyl	7.96	154	3705085	111.29141	ppb	98
47) 2-Chloronaphthalene	7.98	162	2829723	113.70450	ppb	97
48) 2-Nitroaniline	8.11	65	828016	113.68987	ppb	90
49) Dimethyl phthalate	8.33	163	3206270	111.79748	ppb	99
50) 2,6-DNT	8.40	165	776118	116.34856	ppb	# 73
51) Acenaphthylene	8.47	152	4773202	111.81214	ppb	100
52) 3-Nitroaniline	8.60	138	811080	113.53150	ppb	98
53) Acenaphthene	8.67	154	2788036	111.68061	ppb	99
54) 2,4-Dinitrophenol	8.73	184	506560	111.13560	ppb	93
55) 4-Nitrophenol	8.82	65	573086	108.33612	ppb	93
56) Dibenzofuran	8.86	168	4035482	112.39337	ppb	98
57) 2,4-DNT	8.87	165	1065571	114.38052	ppb	88
58) 2,3,4,6-Tetrachlorophenol	9.02	232	758508	116.42876	ppb	# 91
59) Diethyl phthalate	9.15	149	3230127	112.16561	ppb	99
60) 4-Chlorophenyl phenyl ethe	9.27	204	1613821	115.22977	ppb	86
61) Fluorene	9.27	166	3445522	114.21081	ppb	99
62) 4-Nitroaniline	9.33	138	763343	104.31025	ppb	95
65) 4,6-Dinitro-2-methylphenol	9.36	198	720049	113.25479	ppb	# 76
66) Diphenyl amine	9.42	169	5439463	230.66991	ppb	98
67) n-Nitrosodiphenylamine	9.42	169	5439463	230.66991	ppb	98
68) 1,2-Diphenylhydrazine	9.46	77	3646169	127.10735	ppb	# 91
69) 4-Bromophenyl phenyl ether	9.84	248	879907	114.48939	ppb	93
70) Hexachlorobenzene	9.90	284	933312	117.46755	ppb	# 88
71) Atrazine	10.05	200	435130	56.38610	ppb	98
72) Pentachlorophenol	10.15	266	576354	126.61753	ppb	99
73) Phenanthrene	10.40	178	5029299	115.32081	ppb	99
74) Anthracene	10.45	178	5161981	114.15321	ppb	100
75) Carbazol	10.65	167	4513183	113.10543	ppb	98
76) Di-n-butylphthalate	11.06	149	5523433	114.74569	ppb	100
77) Fluoranthene	11.78	202	5137112	113.07621	ppb	97
79) Benzidine	11.95	184	1686175	123.25273	ppb	99
80) Pyrene	12.05	202	5407200	106.63564	ppb	99
82) Butyl benzylphthalate	12.81	149	2449626	108.97428	ppb	85
83) 3,3'-Dichlorobenzidine	13.42	252	1425051	105.45782	ppb	# 98
84) Benz (a) anthracene	13.44	228	5149349	108.94919	ppb	100
85) Bis (2-ethylhexyl) phthala	13.47	149	3619319	108.69253	ppb	96
86) Chrysene	13.49	228	5056489	107.62582	ppb	100
87) Di-n-octylphthalate	14.20	149	6065371	109.66619	ppb	98
89) Benzo (b) fluoranthene	14.70	252	5174948	119.96837	ppb	99
90) Benzo (k) fluoranthene	14.74	252	4177121	103.84309	ppb	99
91) Benzo (a) pyrene	15.14	252	4445199	113.55246	ppb	98
92) Indeno (1,2,3-cd) pyrene	16.96	276	5053234	110.77666	ppb	99
93) Dibenz (a,h) anthracene	17.00	278	4530511	113.91745	ppb	99
94) Benzo (g,h,i) perylene	17.50	276	4271151	110.66526	ppb	98

(#= qualifier out of range (m)= manual integration

1117Y010.D Y1117.M Wed Nov 18 07:43:06 2015

Quantitation Report

Data File : M:\YODA\DATA\Y151117\1117Y010.D
 Acq On : 17 Nov 15 16:00
 Sample : 100ug/ml SVOC 11/06/15
 Misc :

Operator: MA
 Inst : Yoda
 Multipl: 1.00

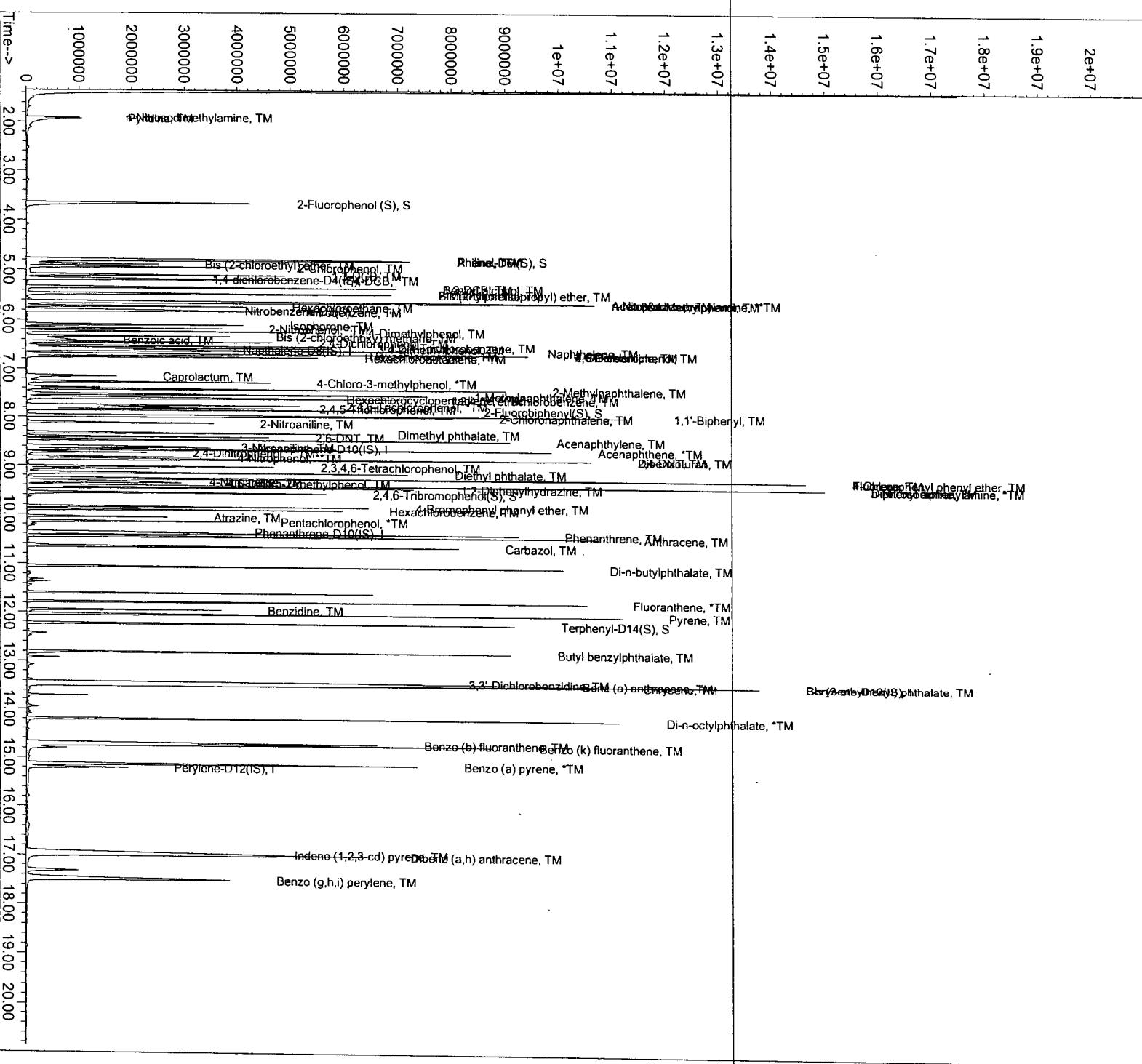
Quant Time: Nov 18 7:32 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response Via : Initial Calibration

Abundance

TIC: 1117Y010.D



Form 7
Second Source Calibration

Lab Name: APPL, Inc.
 Case No: 77838
 Matrix:

SDG No: 77838
 Date Analyzed: 11/17/15
 Instrument: Yoda
 Initial Cal. Date: 11/17/15
 Data File: 1117Y011.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	n-Nitrosodimethylamine	0.3709	0.4347	17	TM	
2	TM	Pyridine	0.9431	0.9352	0.83	TM	
3	*TM	Phenol	2.081	2.085	0.21	*TM	
4	TM	Aniline	1.883	2.008	6.6	TM	
5	TM	Bis (2-chloroethyl) ether	1.450	1.663	15	TM	
6	TM	2-Chlorophenol	1.573	1.595	1.4	TM	
7	TM	1,3-DCB	1.710	1.946	14	TM	
8	*TM	1,4-DCB	1.755	2.035	16	*TM	
9	TM	Benzyl alcohol	0.9096	0.9903	8.9	TM	
10	TM	1,2-DCB	1.628	1.853	14	TM	
11	TM	2-Methylphenol	1.290	1.279	0.84	TM	
12	TM	Bis (2-chloroisopropyl) ether	1.683	1.724	2.4	TM	
13	TM	Acetophenone	1.930	2.242	16	TM	
14	TM	3&4-Methylphenol	1.735	1.747	0.69	TM	
15	**TM	n-Nitrosodi-n-propylamine	1.093	1.085	0.70	**TM	
16	TM	Hexachloroethane	0.6076	0.7002	15	TM	
17	TM	Nitrobenzene	0.3787	0.4053	7.0	TM	
18	TM	Isophorone	0.6603	0.7789	18	TM	
19	*TM	2-Nitrophenol	0.2036	0.2136	4.9	*TM	
20	TM	2,4-Dimethylphenol	0.3203	0.3289	2.7	TM	
21	TML	Benzoic acid	0.2036	0.2356	16	TML	1.5
22	TM	Bis (2-chloroethoxy) methane	0.3904	0.4168	6.7	TM	
23	*TM	2,4-Dichlorophenol	0.2894	0.2957	2.2	*TM	
24	TM	1,2,4-Trichlorobenzene	0.3224	0.3769	17	TM	
25	TM	3,4-Dimethylphenol	0.4794	0.4842	1.00	TM	
26	TM	Naphthalene	1.110	1.141	2.8	TM	
27	TM	4-Chloroaniline	0.3949	0.4532	15	TM	
28	TM	2,6-Dichlorophenol	0.2915	0.3156	8.3	TM	
29	TM	Hexachloropropene	0.2098	0.2185	4.1	TM	
30	*TM	Hexachlorobutadiene	0.1720	0.2051	19	*TM	
31	TM	Caprolactum	0.1371	0.1445	5.4	TM	
32	*TM	4-Chloro-3-methylphenol	0.3210	0.3239	0.92	*TM	
33	TM	2-Methylnaphthalene	0.7160	0.7666	7.1	TM	
34	TM	1-Methylnaphthalene	0.7175	0.7240	0.91	TM	
35	**TML	Hexachlorocyclopentadiene	0.2894	0.3402	18	**TML	0.87
36	TM	1,2,4,5-Tetrachlorobenzene	0.5561	0.5632	1.3	TM	
37	*TM	2,4,6-Trichlorophenol	0.3831	0.3950	3.1	*TM	
38	TM	2,4,5-Trichlorophenol	0.4117	0.4280	4.0	TM	
39	TM	1,1'-Biphenyl	1.609	1.644	2.2	TM	
40	TM	2-Chloronaphthalene	1.211	1.378	14	TM	

Average

7.8

0

0

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
 Case No: 77838
 Matrix: 0

SDG No: 77838
 Date Analyzed: 11/17/15
 Instrument: Yoda
 Cal. Date: 11/17/15
 Data File: 1117Y011.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Nitroaniline	0.3531	0.3693	4.6	TM	
42	TM	Dimethyl phthalate	1.385	1.430	3.2	TM	
43	TM	2,6-DNT	0.3232	0.3535	9.4	TM	
44	TM	Acenaphthylene	2.049	2.139	4.4	TM	
45	TM	3-Nitroaniline	0.3564	0.3831	7.5	TM	
46	*TM	Acenaphthene	1.204	1.233	2.4	*TM	
47	**TML	2,4-Dinitrophenol	0.1660	0.1992	20	**TML	0.73
48	**TM	4-Nitrophenol	0.2456	0.2493	1.5	**TM	
49	TM	Dibenzofuran	1.743	1.798	3.2	TM	
50	TM	2,4-DNT	0.4489	0.4939	10	TM	
51	TM	2,3,4,6-Tetrachlorophenol	0.3142	0.3421	8.9	TM	
52	TM	Diethyl phthalate	1.391	1.404	0.95	TM	
53	TM	4-Chlorophenyl phenyl ether	0.6844	0.7048	3.0	TM	
54	TM	Fluorene	1.461	1.463	0.08	TM	
55	TM	4-Nitroaniline	0.3458	0.3864	12	TM	
56	TML	4,6-Dinitro-2-methylphenol	0.1452	0.1604	10	TML	0.75
57	TM	Diphenyl amine	0.6280	0.6344	1.0	TM	
58	*TM	n-Nitrosodiphenylamine	0.6280	0.6344	1.0	*TM	
59	TM	1,2-Diphenylhydrazine	0.7667	0.8083	5.4	TM	
60	TM	4-Bromophenyl phenyl ether	0.2020	0.2075	2.7	TM	
61	TM	Hexachlorobenzene	0.2103	0.2398	14	TM	
62	TM	Atrazine	0.1981	0.2019	1.9	TM	
63	*TM	Pentachlorophenol	0.1191	0.1231	3.3	*TM	
64	TM	Phenanthrene	1.165	1.179	1.2	TM	
65	TM	Anthracene	1.202	1.189	1.1	TM	
66	TM	Carbazol	1.053	1.076	2.2	TM	
67	TM	Di-n-butylphthalate	1.260	1.294	2.7	TM	
68	*TM	Fluoranthene	1.200	1.245	3.8	*TM	
69	TM	Benzidine	0.4175	0.4179	0.08	TM	
70	TM	Pyrene	1.376	1.379	0.19	TM	
71	TM	Butyl benzylphthalate	0.6043	0.6239	3.2	TM	
72	TM	3,3'-Dichlorobenzidine	0.3729	0.4458	20	TM	
73	TM	Benz (a) anthracene	1.284	1.315	2.4	TM	
74	TM	Bis (2-ethylhexyl) phthalate	0.8911	0.9368	5.1	TM	
75	TM	Chrysene	1.255	1.232	1.8	TM	
76	*TM	Di-n-octylphthalate	1.460	1.551	6.2	*TM	
77	TM	Benzo (b) fluoranthene	2.072	1.989	4.0	TM	
78	TM	Benzo (k) fluoranthene	1.873	2.073	11	TM	
79	*TM	Benzo (a) pyrene	1.852	1.951	5.3	*TM	
80	TM	Indeno (1,2,3-cd) pyrene	2.140	2.288	6.9	TM	

Average 5.2

0

0

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
 Case No: 77838
 Matrix: 0

SDG No: 77838
 Date Analyzed: 11/17/15
 Instrument: Yoda
 Cal. Date: 11/17/15
 Data File: 1117Y011.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	Dibenz (a,h) anthracene	1.868	1.964	5.1	TM	
82	TM	Benzo (g,h,i) perylene	1.814	1.858	2.4	TM	
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Average

3.8

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y011.D Vial: 11
 Acq On : 17 Nov 15 16:29 Operator: MA
 Sample : 50ug/ml SVOC (SS STD10/23/15) Inst : Yoda
 Misc :

Quant Time: Nov 18 7:43 2015 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)

Title : EPA 8270C

Last Update : Wed Nov 18 07:36:25 2015

Response via : Initial Calibration

DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	379945	40.00000	ppb	0.00
20) Naphthalene-D8 (IS)	6.60	136	1645930	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	915211	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.36	188	1712318	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.45	240	1552736	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.20	264	913721	40.00000	ppb	0.00

System Monitoring Compounds

4) 2-Fluorophenol (S)	0.00	112	0	0.00000	ppb	
Spiked Amount 200.000			Recovery =	0.000%		
5) Phenol-D6 (S)	0.00	99	0	0.00000	ppb	
Spiked Amount 200.000			Recovery =	0.000%		
21) Nitrobenzene-D5 (S)	5.73	82	70284	4.87444	ppb	-0.06
Spiked Amount 100.000			Recovery =	4.874%		
45) 2-Fluorobiphenyl (S)	7.80	172	982	0.03265	ppb	-0.04
Spiked Amount 100.000			Recovery =	0.033%		
63) 2,4,6-Tribromophenol (S)	0.00	330	0	0.00000	ppb	
Spiked Amount 200.000			Recovery =	0.000%		
81) Terphenyl-D14 (S)	0.00	244	0	0.00000	ppb	
Spiked Amount 100.000			Recovery =	0.000%		

Target Compounds

				Qvalue	
2) n-Nitrosodimethylamine	1.91	42	206473	58.61102	ppb
3) Pyridine	1.93	79	444174	49.58325	ppb
6) Phenol	4.79	94	990280	50.10405	ppb
7) Aniline	4.80	93	953810	53.32168	ppb
8) Bis (2-chloroethyl) ether	4.87	93	789737	57.35730	ppb
9) 2-Chlorophenol	4.93	128	757562	50.69010	ppb
10) 1,3-DCB	5.10	146	924174	56.90905	ppb
11) 1,4-DCB	5.18	146	966401	57.96304	ppb
12) Benzyl alcohol	5.33	108	470330	54.43496	ppb
13) 1,2-DCB	5.35	146	880205	56.93530	ppb
14) 2-Methylphenol	5.46	107	607448	49.58106	ppb
15) Bis (2-chloroisopropyl) et	5.48	45	818548	51.21033	ppb
16) Acetophenone	5.63	105	1065026	58.10779	ppb
17) 3&4-Methylphenol	5.63	107	1659466	100.69033	ppb
18) n-Nitrosodi-n-propylamine	5.63	70	515357	49.64770	ppb
19) Hexachloroethane	5.73	117	332565	57.62766	ppb
22) Nitrobenzene	5.81	77	833772	53.50743	ppb
23) Isophorone	6.08	82	1602545	58.98349	ppb
24) 2-Nitrophenol	6.17	139	439482	52.46047	ppb
25) 2,4-Dimethylphenol	6.23	122	676734	51.35025	ppb
26) Benzoic acid	6.37	105	484662	49.24996	ppb
27) Bis (2-chloroethoxy) metha	6.33	93	857509	53.37463	ppb
28) 2,4-Dichlorophenol	6.45	162	608389	51.09033	ppb
29) 1,2,4-Trichlorobenzene	6.54	180	775490	58.46384	ppb
30) 3,4-Dimethylphenol	6.57	107	996227	50.49808	ppb
31) Naphthalene	6.62	128	2347832	51.40678	ppb
32) 4-Chloroaniline	6.69	127	932332	57.37480	ppb
33) 2,6-Dichlorophenol	6.70	162	649327	54.13657	ppb
34) Hexachloropropene	6.72	213	449616	52.06969	ppb
35) Hexachlorobutadiene	6.76	225	421980	59.62985	ppb
36) Caprolactum	7.12	55	297317	52.70064	ppb
37) 4-Chloro-3-methylphenol	7.26	107	666388	50.45832	ppb

(#) = qualifier out of range (m) = manual integration

1117Y011.D Y1117.M Wed Nov 18 07:48:25 2015

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y011.D Vial: 11
 Acq On : 17 Nov 15 16:29 Operator: MA
 Sample : 50ug/ml SVOC (SS STD10/23/15) Inst : Yoda
 Misc :

Quant Time: Nov 18 7:43 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)

Title : EPA 8270C

Last Update : Wed Nov 18 07:36:25 2015

Response via : Initial Calibration

DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.42	142	1577212	53.53710	ppb	100
39) 1-Methylnaphthalene	7.53	142	1489608	50.45384	ppb	100
41) Hexachlorocyclopentadiene	7.59	237	389205	50.43741	ppb	100
42) 1,2,4,5-Tetrachlorobenzene	7.61	216	644355	50.64561	ppb	99
43) 2,4,6-Trichlorophenol	7.75	196	451863	51.55304	ppb	99
44) 2,4,5-Trichlorophenol	7.80	196	489651	51.98505	ppb	94
46) 1,1'-Biphenyl	7.96	154	1881071	51.09963	ppb	99
47) 2-Chloronaphthalene	7.98	162	1576874	56.90467	ppb	98
48) 2-Nitroaniline	8.11	65	422445	52.28731	ppb	92
49) Dimethyl phthalate	8.32	163	1635720	51.60254	ppb	98
50) 2,6-DNT	8.39	165	404439	54.68870	ppb	# 67
51) Acenaphthylene	8.46	152	2446834	52.19866	ppb	99
52) 3-Nitroaniline	8.60	138	438269	53.74664	ppb	96
53) Acenaphthene	8.66	154	1410684	51.21659	ppb	99
54) 2,4-Dinitrophenol	8.72	184	227874	49.63552	ppb	92
55) 4-Nitrophenol	8.81	65	285146	50.74836	ppb	98
56) Dibenzofuran	8.87	168	2056618	51.57961	ppb	98
57) 2,4-DNT	8.87	165	565012	55.00903	ppb	95
58) 2,3,4,6-Tetrachlorophenol	9.01	232	391354	54.43243	ppb	97
59) Diethyl phthalate	9.14	149	1606629	50.47368	ppb	99
60) 4-Chlorophenyl phenyl ethe	9.26	204	806294	51.49029	ppb	97
61) Fluorene	9.26	166	1673170	50.03957	ppb	100
62) 4-Nitroaniline	9.31	138	442003	55.85950	ppb	98
65) 4,6-Dinitro-2-methylphenol	9.34	198	343222	49.62256	ppb	85
66) Diphenyl amine	9.41	169	2715553	101.01763	ppb	100
67) n-Nitrosodiphenylamine	9.41	169	2715553	101.01763	ppb	100
68) 1,2-Diphenylhydrazine	9.45	77	1730083	52.71485	ppb	96
69) 4-Bromophenyl phenyl ether	9.84	248	444070	51.34643	ppb	91
70) Hexachlorobenzene	9.91	284	513223	57.02082	ppb	96
71) Atrazine	10.04	200	216096	25.48407	ppb	97
72) Pentachlorophenol	10.14	266	263410	51.64593	ppb	99
73) Phenanthrene	10.39	178	2523176	50.61079	ppb	100
74) Anthracene	10.44	178	2544989	49.44233	ppb	99
75) Carbazol	10.65	167	2302441	51.08685	ppb	98
76) Di-n-butylphthalate	11.05	149	2769665	51.36915	ppb	98
77) Fluoranthene	11.78	202	2665406	51.89653	ppb	99
79) Benzidine	11.95	184	811028	50.03941	ppb	98
80) Pyrene	12.04	202	2676235	50.09697	ppb	99
82) Butyl benzylphthalate	12.80	149	1210950	51.62460	ppb	96
83) 3,3'-Dichlorobenzidine	13.41	252	865338	59.78380	ppb	# 96
84) Benz (a) anthracene	13.44	228	2551774	51.18501	ppb	99
85) Bis (2-ethylhexyl) phthalate	13.47	149	1818172	52.56463	ppb	98
86) Chrysene	13.48	228	2391684	49.10948	ppb	100
87) Di-n-octylphthalate	14.19	149	3009630	53.09983	ppb	# 93
89) Benzo (b) fluoranthene	14.70	252	2271384	47.97910	ppb	99
90) Benzo (k) fluoranthene	14.73	252	2367889	55.35838	ppb	98
91) Benzo (a) pyrene	15.12	252	2228169	52.65735	ppb	# 96
92) Indeno (1,2,3-cd) pyrene	16.94	276	2613295	53.45368	ppb	99
93) Dibenz (a,h) anthracene	16.97	278	2243047	52.55273	ppb	97
94) Benzo (g,h,i) perylene	17.47	276	2122544	51.21327	ppb	97

(#) = qualifier out of range (m) = manual integration
 1117Y011.D Y1117.M Wed Nov 18 07:48:26 2015

Quantitation Report

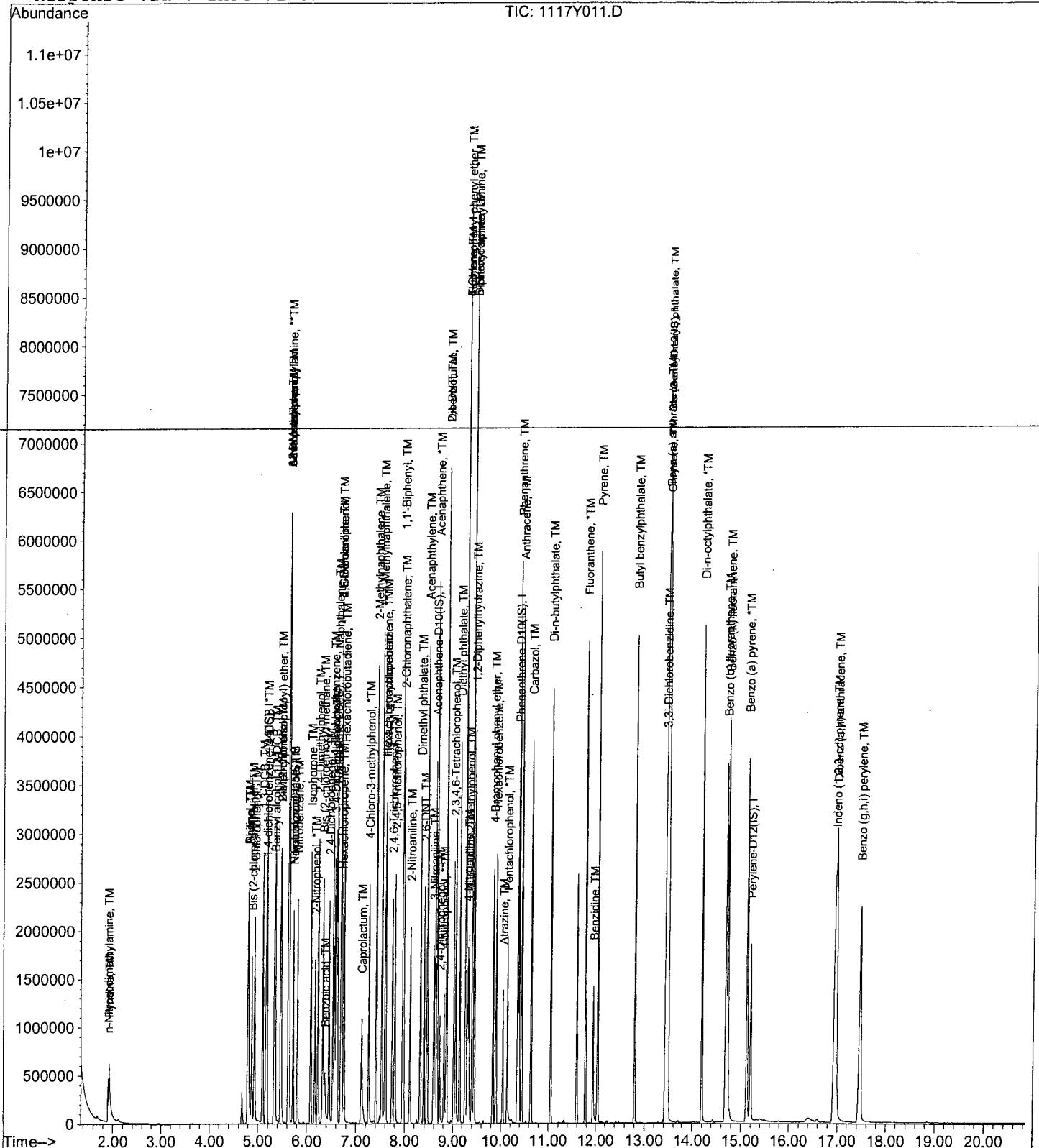
Data File : M:\YODA\DATA\Y151117\1117Y011.D
 Acq On : 17 Nov 15 16:29
 Sample : 50ug/ml SVOC (SS STD10/23/15)
 Misc :

Vial: 11
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 7:43 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



Form 7
Continuing Calibration

Lab Name: APPL, Inc.
 Case No: 77838
 Matrix: _____

SDG No: 77838
 Date Analyzed: 11/18/15
 Instrument: Yoda
 Initial Cal. Date: 11/17/15
 Data File: 1117Y050.D

		Compound	MEAN	CCRF	%D	%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I
2	TM	n-Nitrosodimethylamine	0.3709	0.3964	6.9	TM
3	TM	Pyridine	0.9431	1.063	13	TM
4	S	2-Fluorophenol (S)	1.353	1.379	2.0	S
5	S	Phenol-D6 (S)	1.698	1.730	1.9	S
6	*TM	Phenol	2.081	2.145	3.1	*TM
7	TM	Aniline	1.883	2.009	6.7	TM
8	TM	Bis (2-chloroethyl) ether	1.450	1.549	6.9	TM
9	TM	2-Chlorophenol	1.573	1.611	2.4	TM
10	TM	1,3-DCB	1.710	1.745	2.0	TM
11	*TM	1,4-DCB	1.755	1.775	1.1	*TM
12	TM	Benzyl alcohol	0.9096	0.9557	5.1	TM
13	TM	1,2-DCB	1.628	1.665	2.3	TM
14	TM	2-Methylphenol	1.290	1.308	1.4	TM
15	TM	Bis (2-chloroisopropyl) ether	1.683	1.788	6.3	TM
16	TM	Acetophenone	1.930	1.996	3.4	TM
17	TM	3&4-Methylphenol	1.735	1.761	1.5	TM
18	**TM	n-Nitrosodi-n-propylamine	1.093	1.122	2.7	**TM
19	TM	Hexachloroethane	0.6076	0.6297	3.6	TM
20	I	Naphthalene-D8(IS)	ISTD			I
21	S	Nitrobenzene-D5(S)	0.3504	0.3707	5.8	S
22	TM	Nitrobenzene	0.3787	0.3981	5.1	TM
23	TM	Isophorone	0.6603	0.6975	5.6	TM
24	*TM	2-Nitrophenol	0.2036	0.2135	4.8	*TM
25	TM	2,4-Dimethylphenol	0.3203	0.3310	3.3	TM
26	TML	Benzoic acid	0.2036	0.2351	15	TML
27	TM	Bis (2-chloroethoxy) methane	0.3904	0.4017	2.9	TM
28	*TM	2,4-Dichlorophenol	0.2894	0.2975	2.8	*TM
29	TM	1,2,4-Trichlorobenzene	0.3224	0.3292	2.1	TM
30	TM	3,4-Dimethylphenol	0.4794	0.4860	1.4	TM
31	TM	Naphthalene	1.110	1.137	2.4	TM
32	TM	4-Chloroaniline	0.3949	0.4164	5.4	TM
33	TM	2,6-Dichlorophenol	0.2915	0.2958	1.5	TM
34	TM	Hexachloropropene	0.2098	0.2211	5.4	TM
35	*TM	Hexachlorobutadiene	0.1720	0.1773	3.1	*TM
36	TM	Caprolactum	0.1371	0.1506	9.8	TM
37	*TM	4-Chloro-3-methylphenol	0.3210	0.3366	4.9	*TM
38	TM	2-Methylnaphthalene	0.7160	0.7267	1.5	TM
39	TM	1-Methylnaphthalene	0.7175	0.7382	2.9	TM
40	I	Acenaphthene-D10(IS)	ISTD			I

Average 4.3

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Form 7
Continuing Calibration

Lab Name: APPL, Inc.
 Case No: 77838
 Matrix: 0

SDG No: 77838
 Date Analyzed: 11/18/15
 Instrument: Yoda
 Cal. Date: 11/17/15
 Data File: 1117Y050.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TML	Hexachlorocyclopentadiene	0.2894	0.3241		12	**TML 3.4
42	TM	1,2,4,5-Tetrachlorobenzene	0.5561	0.5672		2.0	TM
43	*TM	2,4,6-Trichlorophenol	0.3831	0.3923		2.4	*TM
44	TM	2,4,5-Trichlorophenol	0.4117	0.4180		1.5	TM
45	S	2-Fluorobiphenyl(S)	1.314	1.317	0.20	S	
46	TM	1,1'-Biphenyl	1.609	1.646		2.3	TM
47	TM	2-Chloronaphthalene	1.211	1.239		2.3	TM
48	TM	2-Nitroaniline	0.3531	0.3805		7.8	TM
49	TM	Dimethyl phthalate	1.385	1.406		1.5	TM
50	TM	2,6-DNT	0.3232	0.3323		2.8	TM
51	TM	Acenaphthylene	2.049	2.119		3.4	TM
52	TM	3-Nitroaniline	0.3564	0.3714		4.2	TM
53	*TM	Acenaphthene	1.204	1.232		2.3	*TM
54	**TML	2,4-Dinitrophenol	0.1660	0.1931		16	**TML 3.4
55	**TM	4-Nitrophenol	0.2456	0.2544		3.6	**TM
56	TM	Dibenzofuran	1.743	1.772		1.7	TM
57	TM	2,4-DNT	0.4489	0.4702		4.7	TM
58	TM	2,3,4,6-Tetrachlorophenol	0.3142	0.3282		4.4	TM
59	TM	Diethyl phthalate	1.391	1.430		2.8	TM
60	TM	4-Chlorophenyl phenyl ether	0.6844	0.6871		0.39	TM
61	TM	Fluorene	1.461	1.494		2.2	TM
62	TM	4-Nitroaniline	0.3458	0.3835		11	TM
63	S	2,4,6-Tribromophenol(S)	0.1596	0.1588	0.54	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TML	4,6-Dinitro-2-methylphenol	0.1452	0.1603		10	TML 0.76
66	TM	Diphenyl amine	0.6280	0.6338		0.92	TM
67	*TM	n-Nitrosodiphenylamine	0.6280	0.6338		0.92	*TM
68	TM	1,2-Diphenylhydrazine	0.7667	0.7625		0.55	TM
69	TM	4-Bromophenyl phenyl ether	0.2020	0.2042		1.1	TM
70	TM	Hexachlorobenzene	0.2103	0.2070		1.5	TM
71	TM	Atrazine	0.1981	0.2073		4.6	TM
72	*TM	Pentachlorophenol	0.1191	0.1251		5.0	*TM
73	TM	Phenanthrene	1.165	1.165	0.06	TM	
74	TM	Anthracene	1.202	1.225		1.9	TM
75	TM	Carbazol	1.053	1.087		3.3	TM
76	TM	Di-n-butylphthalate	1.260	1.311		4.1	TM
77	*TM	Fluoranthene	1.200	1.226		2.2	*TM
78	I	Chrysene-D12(IS)	ISTD			I	
79	TM	Benzidine	0.4175	0.4588		9.9	TM
80	TM	Pyrene	1.376	1.409		2.4	TM

Average

3.7

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Form 7
Continuing Calibration

Lab Name: APPL, Inc.
 Case No: 77838
 Matrix: 0

SDG No: 77838
 Date Analyzed: 11/18/15
 Instrument: Yoda
 Cal. Date: 11/17/15
 Data File: 1117Y050.D

		Compound	MEAN	CCRF	%D	%Drift	
81	S	Terphenyl-D14(S)	0.9723	0.9852	1.3	S	
82	TM	Butyl benzylphthalate	0.6043	0.6442	6.6	TM	
83	TM	3,3'-Dichlorobenzidine	0.3729	0.4104	10	TM	
84	TM	Benz (a) anthracene	1.284	1.323	3.0	TM	
85	TM	Bis (2-ethylhexyl) phthalate	0.8911	0.9253	3.8	TM	
86	TM	Chrysene	1.255	1.261	0.54	TM	
87	*TM	Di-n-octylphthalate	1.460	1.546	5.9	*TM	
88	I	Perylene-D12(IS)	ISTD			I	
89	TM	Benzo (b) fluoranthene	2.072	2.074	0.06	TM	
90	TM	Benzo (k) fluoranthene	1.873	2.006	7.1	TM	
91	*TM	Benzo (a) pyrene	1.852	1.934	4.4	*TM	
92	TM	Indeno (1,2,3-cd) pyrene	2.140	2.216	3.5	TM	
93	TM	Dibenz (a,h) anthracene	1.868	1.921	2.8	TM	
94	TM	Benzo (g,h,i) perylene	1.814	1.864	2.8	TM	
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Average

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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y050.D Vial: 50
 Acq On : 18 Nov 15 14:12 Operator: MA
 Sample : CCV: 50ug/ml SVOC 11/17/15 Inst : Yoda
 Misc : soil Multiplr: 1.00

Quant Time: Nov 18 15:14 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	415768	40.00000	ppb	0.00
20) Naphthalene-D8 (IS)	6.60	136	1771815	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	989947	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.35	188	1840515	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.45	240	1656940	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.20	264	969407	40.00000	ppb	0.00

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.64	112	1433802	101.97432	ppb	0.00
Spiked Amount	200.000			Recovery	= 50.987%	
5) Phenol-D6 (S)	4.77	99	1797841	101.86838	ppb	0.00
Spiked Amount	200.000			Recovery	= 50.934%	
21) Nitrobenzene-D5 (S)	5.79	82	821111	52.90087	ppb	0.00
Spiked Amount	100.000			Recovery	= 52.901%	
45) 2-Fluorobiphenyl (S)	7.84	172	1629737	50.10238	ppb	0.00
Spiked Amount	100.000			Recovery	= 50.102%	
63) 2,4,6-Tribromophenol (S)	9.55	330	392982	99.46250	ppb	0.00
Spiked Amount	200.000			Recovery	= 49.732%	
81) Terphenyl-D14 (S)	12.23	244	2040500	50.66332	ppb	0.00
Spiked Amount	100.000			Recovery	= 50.663%	

Target Compounds

				Qvalue	
2) n-Nitrosodimethylamine	1.90	42	206025	53.44482	ppb
3) Pyridine	1.92	79	552667	56.37870	ppb
6) Phenol	4.79	94	1115010	51.55411	ppb
7) Aniline	4.80	93	1043892	53.32946	ppb
8) Bis (2-chloroethyl) ether	4.87	93	805106	53.43539	ppb
9) 2-Chlorophenol	4.93	128	837206	51.19258	ppb
10) 1,3-DCB	5.10	145	906660	51.02015	ppb
11) 1,4-DCB	5.18	146	922301	50.55174	ppb
12) Benzyl alcohol	5.33	108	496701	52.53393	ppb
13) 1,2-DCB	5.35	146	865125	51.13831	ppb
14) 2-Methylphenol	5.46	107	679851	50.70959	ppb
15) Bis (2-chloroisopropyl) et	5.47	45	929351	53.13282	ppb
16) Acetophenone	5.62	105	1037260	51.71677	ppb
17) 3&4-Methylphenol	5.63	107	1830376	101.49144	ppb
18) n-Nitrosodi-n-propylamine	5.63	70	583129	51.33638	ppb
19) Hexachloroethane	5.72	117	327246	51.82012	ppb
22) Nitrobenzene	5.81	77	881678	52.56175	ppb
23) Isophorone	6.08	82	1544705	52.81518	ppb
24) 2-Nitrophenol	6.16	139	472774	52.42491	ppb
25) 2,4-Dimethylphenol	6.22	122	732981	51.66665	ppb
26) Benzoic acid	6.37	105	520619	49.15567	ppb
27) Bis (2-chloroethoxy) metha	6.33	93	889642	51.44041	ppb
28) 2,4-Dichlorophenol	6.45	162	658997	51.40837	ppb
29) 1,2,4-Trichlorobenzene	6.54	180	729092	51.06067	ppb
30) 3,4-Dimethylphenol	6.56	107	1076353	50.68323	ppb
31) Naphthalene	6.62	128	2517362	51.20260	ppb
32) 4-Chloroaniline	6.69	127	922254	52.72228	ppb
33) 2,6-Dichlorophenol	6.69	162	655085	50.73619	ppb
34) Hexachloropropene	6.72	213	489776	52.69067	ppb
35) Hexachlorobutadiene	6.76	225	392770	51.55884	ppb
36) Caprolactum	7.11	55	333490	54.91260	ppb
37) 4-Chloro-3-methylphenol	7.26	107	745508	52.43858	ppb

(#= qualifier out of range (m)= manual integration

1117Y050.D Y1117.M Wed Nov 18 15:17:21 2015

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y050.D Vial: 50
 Acq On : 18 Nov 15 14:12 Operator: MA
 Sample : CCV: 50ug/ml SVOC 11/17/15 Inst : Yoda
 Misc : soil Multiplr: 1.00

Quant Time: Nov 18 15:14 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.42	142	1609399	50.74830	ppb	99
39) 1-Methylnaphthalene	7.53	142	1634931	51.44162	ppb	100
41) Hexachlorocyclopentadiene	7.59	237	401082	48.29966	ppb	98
42) 1,2,4,5-Tetrachlorobenzene	7.60	216	701921	51.00516	ppb	98
43) 2,4,6-Trichlorophenol	7.75	196	485473	51.20612	ppb	99
44) 2,4,5-Trichlorophenol	7.80	196	517303	50.77455	ppb	# 91
46) 1,1'-Biphenyl	7.96	154	2036820	51.15340	ppb	99
47) 2-Chloronaphthalene	7.97	162	1532969	51.14387	ppb	96
48) 2-Nitroaniline	8.10	65	470848	53.87858	ppb	83
49) Dimethyl phthalate	8.32	163	1740157	50.75278	ppb	98
50) 2,6-DNT	8.39	165	411202	51.40544	ppb	# 76
51) Acenaphthylene	8.46	152	2622199	51.71658	ppb	99
52) 3-Nitroaniline	8.59	138	459523	52.09873	ppb	87
53) Acenaphthene	8.66	154	1523899	51.15009	ppb	100
54) 2,4-Dinitrophenol	8.72	184	238942	48.30731	ppb	92
55) 4-Nitrophenol	8.80	65	314840	51.80288	ppb	83
56) Dibenzofuran	8.87	168	2193253	50.85368	ppb	97
57) 2,4-DNT	8.87	165	581870	52.37350	ppb	85
58) 2,3,4,6-Tetrachlorophenol	9.01	232	406089	52.21779	ppb	95
59) Diethyl phthalate	9.14	149	1769145	51.38331	ppb	99
60) 4-Chlorophenyl phenyl ethe	9.26	204	850186	50.19438	ppb	95
61) Fluorene	9.26	166	1848184	51.10084	ppb	99
62) 4-Nitroaniline	9.31	138	474535	55.44334	ppb	95
65) 4,6-Dinitro-2-methylphenol	9.34	198	368883	49.61817	ppb	83
66) Diphenyl amine	9.41	169	2916104	100.92226	ppb	100
67) n-Nitrosodiphenylamine	9.41	169	2916104	100.92226	ppb	100
68) 1,2-Diphenylhydrazine	9.45	77	1754193	49.72656	ppb	94
69) 4-Bromophenyl phenyl ether	9.84	248	469897	50.54830	ppb	88
70) Hexachlorobenzene	9.90	284	476310	49.23366	ppb	# 79
71) Atrazine	10.04	200	238433	26.15974	ppb	97
72) Pentachlorophenol	10.14	266	287879	52.51204	ppb	98
73) Phenanthrene	10.39	178	2681061	50.03194	ppb	100
74) Anthracene	10.44	178	2819279	50.95610	ppb	100
75) Carbazol	10.64	167	2501454	51.63667	ppb	98
76) Di-n-butylphthalate	11.05	149	3016866	52.05665	ppb	99
77) Fluoranthene	11.77	202	2819673	51.07622	ppb	# 95
79) Benzidine	11.94	184	950337	54.94711	ppb	97
80) Pyrene	12.04	202	2918723	51.20012	ppb	99
82) Butyl benzylphthalate	12.80	149	1334266	53.30448	ppb	93
83) 3,3'-Dichlorobenzidine	13.41	252	850014	55.03192	ppb	# 98
84) Benz (a) anthracene	13.43	228	2740226	51.50837	ppb	99
85) Bis (2-ethylhexyl) phthala	13.46	149	1916537	51.92383	ppb	# 95
86) Chrysene	13.48	228	2612513	50.27023	ppb	99
87) Di-n-octylphthalate	14.19	149	3202157	52.94360	ppb	96
89) Benzo (b) fluoranthene	14.69	252	2512899	50.03155	ppb	98
90) Benzo (k) fluoranthene	14.72	252	2430610	53.56052	ppb	98
91) Benzo (a) pyrene	15.12	252	2343527	52.20214	ppb	98
92) Indeno (1,2,3-cd) pyrene	16.93	276	2685202	51.76946	ppb	98
93) Dibenz (a,h) anthracene	16.97	278	2327815	51.40588	ppb	99
94) Benzo (g,h,i) perylene	17.46	276	2259162	51.37841	ppb	100

(#) = qualifier out of range (m) = manual integration
 1117Y050.D Y1117.M Wed Nov 18 15:17:22 2015

Quantitation Report

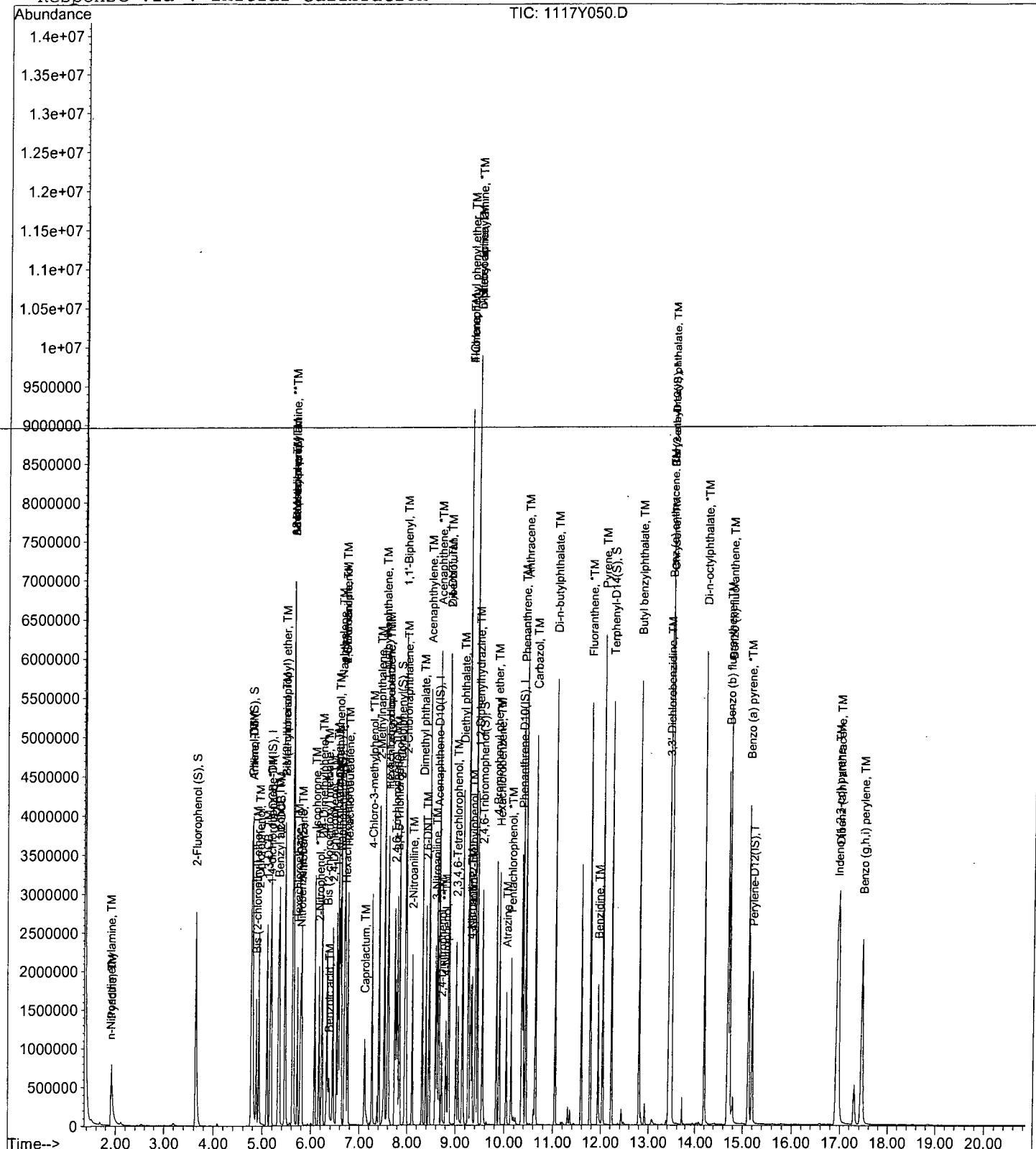
Data File : M:\YODA\DATA\Y151117\1117Y050.D
 Acq On : 18 Nov 15 14:12
 Sample : CCV: 50ug/ml SVOC 11/17/15
 Misc : soil

Vial: 50
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Quant Time: Nov 18 15:14 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



**EPA METHOD 8270D
Semivolatile Organic Compounds
Raw Data**

APPL, INC.

Method Blank
EPA 8270D SOILS

Blank Name/QCG: **151117S-24401 - 202360**
 Batch ID: #87DJU-151117A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BIS (2-ETHYLHEXYL) PHTHALATE	0.167 U	0.66	0.167	0.062	mg/kg	11/17/15	11/18/15
BLANK	BUTYL BENZYL PHTHALATE	0.167 U	0.33	0.167	0.056	mg/kg	11/17/15	11/18/15
BLANK	DI-N-BUTYL PHTHALATE	0.167 U	0.33	0.167	0.066	mg/kg	11/17/15	11/18/15
BLANK	DI-N-OCTYL PHTHALATE	0.167 U	0.33	0.167	0.058	mg/kg	11/17/15	11/18/15
BLANK	DIETHYL PHTHALATE	0.167 U	0.33	0.167	0.062	mg/kg	11/17/15	11/18/15
BLANK	DIMETHYL PHTHALATE	0.167 U	0.33	0.167	0.063	mg/kg	11/17/15	11/18/15
BLANK	SURROGATE: 2,4,6-TRIBROMOP	75.2	35-125			%	11/17/15	11/18/15
BLANK	SURROGATE: 2-FLUORBIPHENY	66.3	45-105			%	11/17/15	11/18/15
BLANK	SURROGATE: 2-FLUOROPHENO	63.4	35-105			%	11/17/15	11/18/15
BLANK	SURROGATE: NITROBENZENE-	63.3	35-100			%	11/17/15	11/18/15
BLANK	SURROGATE: PHENOL (S)	70.1	40-100			%	11/17/15	11/18/15
BLANK	SURROGATE: TERPHENYL-D14 (	77.6	30-125			%	11/17/15	11/18/15

Quant Method: Y1117.M
 Run #: 1117Y057
 Instrument: Yoda
 Sequence: Y151117
 Initials: RP

GC SC-Blank-REG MDLs-DOD
 Printed: 11/25/15 3:03:26 PM

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y057.D Vial: 57
 Acq On : 18 Nov 15 17:38 Operator: MA
 Sample : 151117A BLK 1/30.01G Inst : Yoda
 Misc : soil Multiplr: 33.32

Quant Time: Nov 19 7:49 2015 Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	434935	40.00000	ppb	0.00
20) Naphthalene-D8 (IS)	6.60	136	1971939	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	1102954	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.36	188	2077945	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.44	240	1815559	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.18	264	1060317	40.00000	ppb	-0.02

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.64	112	1866372	4228.24936	ppb	0.00
Spiked Amount	6664.445		Recovery	=	63.445%	
5) Phenol-D6 (S)	4.77	99	2589013	4672.86354	ppb	0.00
Spiked Amount	6664.445		Recovery	=	70.116%	
21) Nitrobenzene-D5 (S)	5.79	82	1093648	2109.58713	ppb	0.00
Spiked Amount	3332.223		Recovery	=	63.309%	
45) 2-Fluorobiphenyl (S)	7.84	172	2404279	2210.62111	ppb	0.00
Spiked Amount	3332.223		Recovery	=	66.341%	
63) 2,4,6-Tribromophenol (S)	9.55	330	661897	5010.32303	ppb	0.00
Spiked Amount	6664.445		Recovery	=	75.180%	
81) Terphenyl-D14 (S)	12.22	244	3422518	2584.24229	ppb	0.00
Spiked Amount	3332.223		Recovery	=	77.553%	

Target Compounds	Qvalue
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Quantitation Report

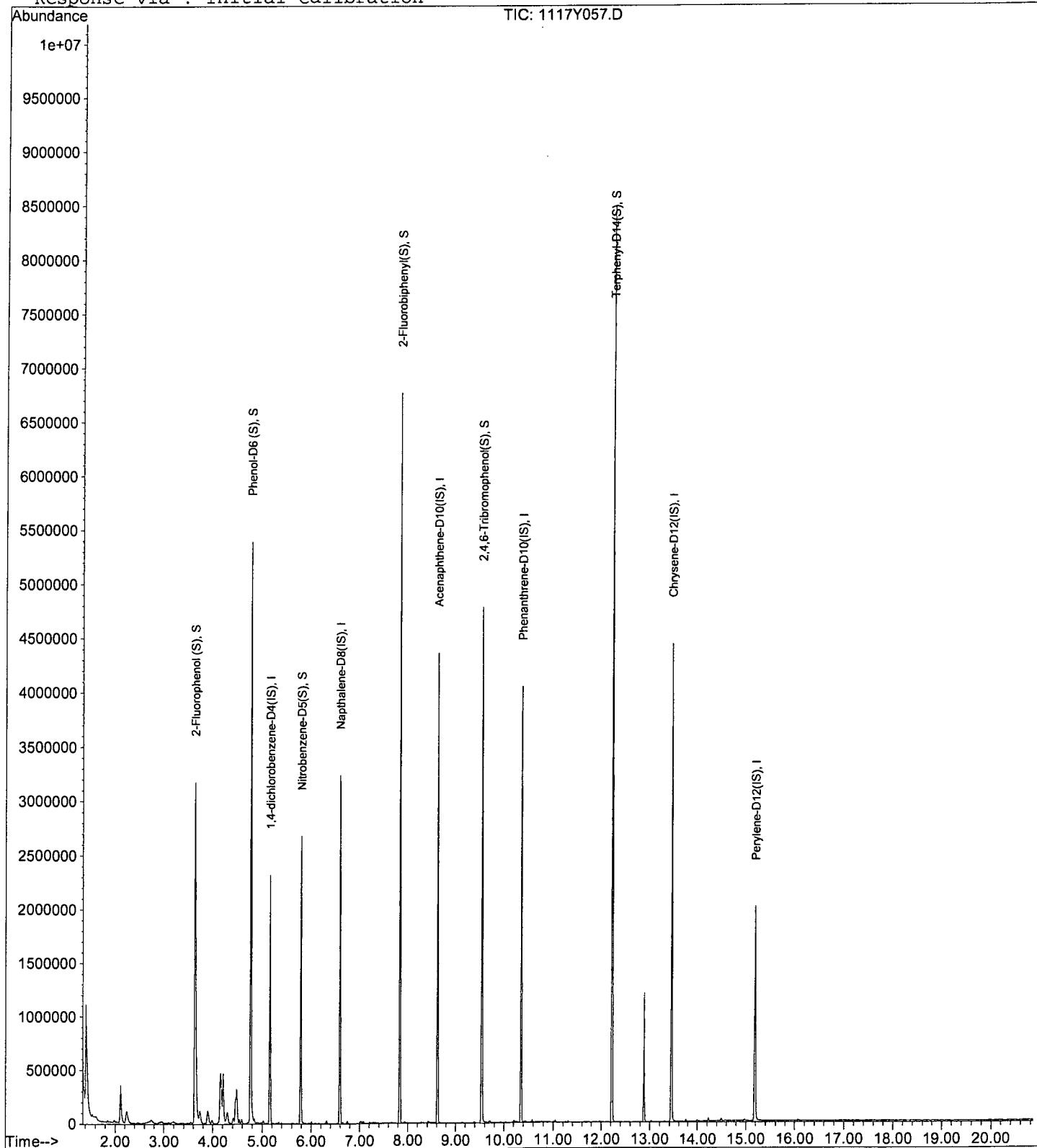
Data File : M:\YODA\DATA\Y151117\1117Y057.D
 Acq On : 18 Nov 15 17:38
 Sample : 151117A BLK 1/30.01G
 Misc : soil

Vial: 57
 Operator: MA
 Inst : Yoda
 Multiplr: 33.32

Quant Time: Nov 19 7:49 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D SOILS

APPL ID: 151117S-24401 LCS - 202360

Batch ID: #87DJU-151117A

APPL Inc.

908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level	SPK Result	SPK % Recovery	Recovery Limits
	mg/kg	mg/kg	Recovery	Limits
BIS (2-ETHYLHEXYL) PHTHALATE	1.67	1.37	82.0	45-125
BUTYL BENZYL PHTHALATE	1.67	1.37	82.0	50-125
DI-N-BUTYL PHTHALATE	1.67	1.31	78.4	55-110
DI-N-OCTYL PHTHALATE	1.67	1.37	82.0	40-130
DIETHYL PHTHALATE	1.67	1.27	76.0	50-115
DIMETHYL PHTHALATE	1.67	1.26	75.4	50-110
SURROGATE: 2,4,6-TRIBROMOPHENOL	6.67	5.44	81.6	35-125
SURROGATE: 2-FLUORBIPHENYL (S)	3.33	2.52	75.7	45-105
SURROGATE: 2-FLUOROPHENOL (S)	6.67	5.23	78.4	35-105
SURROGATE: NITROBENZENE-D5 (S)	3.33	2.59	77.8	35-100
SURROGATE: PHENOL (S)	6.67	5.51	82.6	40-100
SURROGATE: TERPHENYL-D14 (S)	3.33	2.67	80.2	30-125

Comments: _____

Primary	SPK
Quant Method :	Y1117.M
Extraction Date :	11/17/15
Analysis Date :	11/18/15
Instrument :	Yoda
Run :	1117Y058
Initials :	RP

Printed: 11/25/15 3:03:20 PM

APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y058.D Vial: 58
 Acq On : 18 Nov 15 18:07 Operator: MA
 Sample : 151117A LCS-1 1/30.10G Inst : Yoda
 Misc : soil Multiplr: 33.22

Quant Time: Nov 19 7:23 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	434162	40.00000	ppb	0.00
20) Naphthalene-D8 (IS)	6.59	136	1924119	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	1108957	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.35	188	2033154	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.45	240	1817498	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.20	264	1074492	40.00000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (S)	3.64	112	2309251	5225.23105	ppb	0.00
Spiked Amount 6644.518			Recovery	= 78.640%		
5) Phenol-D6 (S)	4.77	99	3057260	5511.28943	ppb	0.00
Spiked Amount 6644.518			Recovery	= 82.945%		
21) Nitrobenzene-D5 (S)	5.79	82	1312208	2586.32777	ppb	0.00
Spiked Amount 3322.259			Recovery	= 77.848%		
45) 2-Fluorobiphenyl (S)	7.84	172	2765186	2521.13396	ppb	0.00
Spiked Amount 3322.259			Recovery	= 75.886%		
63) 2,4,6-Tribromophenol (S)	9.55	330	725162	5443.17722	ppb	0.00
Spiked Amount 6644.518			Recovery	= 81.920%		
81) Terphenyl-D14 (S)	12.23	244	3557018	2674.91142	ppb	0.00
Spiked Amount 3322.259			Recovery	= 80.515%		
Target Compounds						
2) n-Nitrosodimethylamine	1.90	42	154707	1276.81625	ppb	✓ 83
3) Pyridine	1.92	79	344968	1119.60056	ppb	96
6) Phenol	4.79	94	879846	1294.26705	ppb	# 83
7) Aniline	4.80	93	843654	1371.22495	ppb	# 71
8) Bis (2-chloroethyl) ether	4.87	93	589581	1244.95057	ppb	93
9) 2-Chlorophenol	4.93	128	661146	1286.18900	ppb	95
10) 1,3-DCB	5.10	146	687072	1230.07684	ppb	98
11) 1,4-DCB	5.18	146	697907	1217.00884	ppb	98
12) Benzyl alcohol	5.33	108	392120	1319.46110	ppb	94
13) 1,2-DCB	5.35	146	664113	1248.94182	ppb	98
14) 2-Methylphenol	5.46	107	548130	1300.74649	ppb	96
15) Bis (2-chloroisopropyl) et	5.47	45	729360	1326.65429	ppb	96
16) Acetophenone	5.62	105	818861	1298.93289	ppb	98
17) 3&4-Methylphenol	5.64	107	1477978	2607.29279	ppb	97
18) n-Nitrosodi-n-propylamine	5.63	70	471144	1319.61432	ppb	96
19) Hexachloroethane	5.72	117	245390	1236.27105	ppb	82
22) Nitrobenzene	5.81	77	706205	1287.98409	ppb	96
23) Isophorone	6.08	82	1245786	1303.09654	ppb	98
24) 2-Nitrophenol	6.16	139	376914	1278.63415	ppb	89
25) 2,4-Dimethylphenol	6.22	122	580246	1251.26597	ppb	99
26) Benzoic acid	6.36	105	411184	1232.84296	ppb	96
27) Bis (2-chloroethoxy) metha	6.32	93	713976	1262.96903	ppb	98
28) 2,4-Dichlorophenol	6.44	162	541196	1291.59057	ppb	97
29) 1,2,4-Trichlorobenzene	6.53	180	578722	1239.92116	ppb	99
30) 3,4-Dimethylphenol	6.56	107	896099	1290.87872	ppb	97
31) Naphthalene	6.62	128	1990846	1238.80795	ppb	99
32) 4-Chloroaniline	6.69	127	770904	1348.22952	ppb	# 93
33) 2,6-Dichlorophenol	6.69	162	538137	1275.06704	ppb	98
34) Hexachloropropene	6.71	213	386787	1272.99883	ppb	99
35) Hexachlorobutadiene	6.76	225	307133	1233.42074	ppb	98
36) Caprolactum	7.10	55	271863	1369.49105	ppb	96
37) 4-Chloro-3-methylphenol	7.26	107	616387	1326.39235	ppb	98

(#= qualifier out of range (m) = manual integration

1117Y058.D Y1117.M Thu Nov 19 07:58:39 2015

Page 1

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y058.D Vial: 58
 Acq On : 18 Nov 15 18:07 Operator: MA
 Sample : 151117A LCS-1 1/30.10G Inst : Yoda
 Misc : soil Multiplr: 33.22

Quant Time: Nov 19 7:23 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.41	142	1313317	1266.91444	ppb	100
39) 1-Methylnaphthalene	7.53	142	1310581	1261.53416	ppb	99
41) Hexachlorocyclopentadiene	7.59	237	270552	1035.31934	ppb	98
42) 1,2,4,5-Tetrachlorobenzene	7.60	216	572353	1233.44723	ppb	97
43) 2,4,6-Trichlorophenol	7.74	196	398811	1247.54042	ppb	99
44) 2,4,5-Trichlorophenol	7.80	196	427528	1244.50432	ppb	95
46) 1,1'-Biphenyl	7.96	154	1666195	1241.01896	ppb	98
47) 2-Chloronaphthalene	7.97	162	1256060	1242.80024	ppb	97
48) 2-Nitroaniline	8.10	65	390849	1326.40199	ppb	90
49) Dimethyl phthalate	8.32	163	1461786	1264.40424	ppb	99
50) 2,6-DNT	8.39	165	342535	1269.95853	ppb	86
51) Acenaphthylene	8.46	152	2129998	1245.87374	ppb	99
52) 3-Nitroaniline	8.59	138	382958	1287.66163	ppb	92
53) Acenaphthene	8.66	154	1231015	1225.41807	ppb	99
54) 2,4-Dinitrophenol	8.71	184	177968	1136.29219	ppb	94
55) 4-Nitrophenol	8.80	65	255079	1244.71363	ppb	93
56) Dibenzofuran	8.86	168	1803461	1240.14125	ppb	98
57) 2,4-DNT	8.86	165	482235	1287.28603	ppb	90
58) 2,3,4,6-Tetrachlorophenol	9.01	232	322757	1230.84576	ppb	93
59) Diethyl phthalate	9.14	149	1470854	1266.94835	ppb	98
60) 4-Chlorophenyl phenyl ethe	9.27	204	706987	1237.89365	ppb	89
61) Fluorene	9.26	166	1518184	1244.90999	ppb	100
62) 4-Nitroaniline	9.31	138	383832	1330.00416	ppb	# 82
65) 4,6-Dinitro-2-methylphenol	9.34	198	287756	1199.07725	ppb	# 73
66) Diphenyl amine	9.41	169	2430975	2530.27091	ppb	99
67) n-Nitrosodiphenylamine	9.41	169	2430975	2530.27091	ppb	99
68) 1,2-Diphenylhydrazine	9.45	77	1467699	1251.26887	ppb	# 89
69) 4-Bromophenyl phenyl ether	9.83	248	387431	1253.43200	ppb	92
70) Hexachlorobenzene	9.90	284	398284	1238.13462	ppb	# 87
71) Atrazine	10.04	200	183295	604.81185	ppb	99
72) Pentachlorophenol	10.14	266	216310	1186.66488	ppb	98
73) Phenanthrene	10.38	178	2254645	1265.38118	ppb	99
74) Anthracene	10.44	178	2349301	1277.02487	ppb	100
75) Carbazol	10.64	167	2050416	1272.94681	ppb	99
76) Di-n-butylphthalate	11.05	149	2517466	1306.43062	ppb	99
77) Fluoranthene	11.77	202	2313923	1260.58310	ppb	97
79) Benzidine	11.94	184	174171	305.00670	ppb	99
80) Pyrene	12.04	202	2452689	1303.12746	ppb	98
82) Butyl benzylphthalate	12.80	149	1134979	1373.33178	ppb	82
83) 3,3'-Dichlorobenzidine	13.41	252	712246	1396.64152	ppb	99
84) Benz (a) anthracene	13.43	228	2241392	1276.07310	ppb	99
85) Bis (2-ethylhexyl) phthala	13.46	149	1668563	1369.17328	ppb	98
86) Chrysene	13.48	228	2218152	1292.73654	ppb	99
87) Di-n-octylphthalate	14.19	149	2740195	1372.20400	ppb	98
89) Benzo (b) fluoranthene	14.69	252	2236739	1334.81387	ppb	99
90) Benzo (k) fluoranthene	14.72	252	1887435	1246.63114	ppb	99
91) Benzo (a) pyrene	15.12	252	1940756	1295.76350	ppb	99
92) Indeno (1,2,3-cd) pyrene	16.92	276	2237093	1292.75767	ppb	99
93) Dibenz (a,h) anthracene	16.96	278	1930661	1277.92922	ppb	97
94) Benzo (g,h,i) perylene	17.45	276	1873751	1277.26672	ppb	99

(#) = qualifier out of range (m) = manual integration
 1117Y058.D Y1117.M Thu Nov 19 07:58:40 2015

Quantitation Report

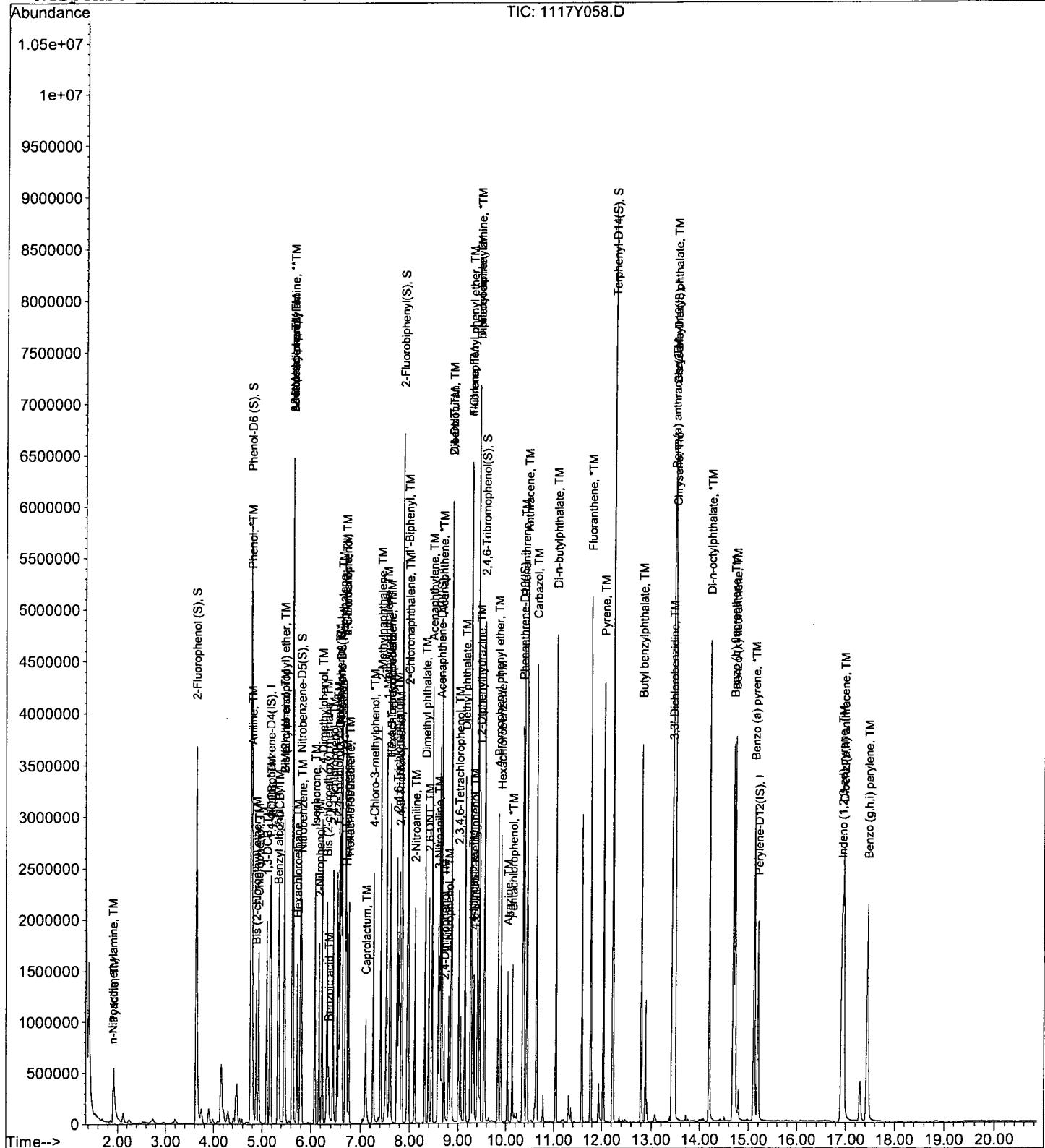
Data File : M:\YODA\DATA\Y151117\1117Y058.D
 Acq On : 18 Nov 15 18:07
 Sample : 151117A LCS-1 1/30.10G
 Misc : soil

Vial: 58
 Operator: MA
 Inst : Yoda
 Multiplr: 33.22

Quant Time: Nov 19 7:23 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



Matrix Spike Recoveries
EPA 8270D SOILS

APPL ID: 151117S-24401 MS - 202360

Batch ID: #87DJU-151117A

Sample ID: AZ24401

Client ID: S67-SS53-0006

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Lvl	Matrix Result	SPK Result	DUP Result	SPK % Recovery	DUP % Recovery	Recovery	RPD %	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	Recovery	Recovery	Limits	%	Limits
BIS (2-ETHYLHEXYL) PHTHALATE	1.67	0.017	1.36	1.25	80.4	73.8	45-125	8.4	30
BUTYL BENZYL PHTHALATE	1.67	ND	1.33	1.25	79.6	74.9	50-125	6.2	30
DI-N-BUTYL PHTHALATE	1.67	ND	1.32	1.21	79.0	72.5	55-110	8.7	30
DI-N-OCTYL PHTHALATE	1.67	ND	1.38	1.26	82.6	75.4	40-130	9.1	30
DIETHYL PHTHALATE	1.67	ND	1.28	1.24	76.6	74.3	50-115	3.2	30
DIMETHYL PHTHALATE	1.67	ND	1.37	1.33	82.0	79.6	50-110	3.0	30
SURROGATE: 2,4,6-TRIBROMOPHENOL	6.67	NA	5.42	5.23	81.3	78.4	35-125		
SURROGATE: 2-FLUORBIPHENYL (S)	3.33	NA	1.98	2.09	59.5	62.8	45-105		
SURROGATE: 2-FLUOROPHENOL (S)	6.67	NA	5.22	4.73	78.3	70.9	35-105		
SURROGATE: NITROBENZENE-D5 (S)	3.33	NA	2.65	2.46	79.6	73.9	35-100		
SURROGATE: PHENOL (S)	6.67	NA	5.55	5.03	83.2	75.4	40-100		
SURROGATE: TERPHENYL-D14 (S)	3.33	NA	2.49	2.33	74.8	70.0	30-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	Y1117.M	Y1117.M
Extraction Date :	11/17/15	11/17/15
Analysis Date :	11/18/15	11/18/15
Instrument :	Yoda	Yoda
Run :	1117Y064	1117Y065
Initials :		RP

Printed: 11/25/15 3:03:16 PM
 APPL MSD SCI

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y064.D Vial: 64
 Acq On : 18 Nov 15 21:00 Operator: MA
 Sample : AZ24401S03 MS-1 1/30.80G Inst : Yoda
 Misc : soil Multiplr: 32.47

Quant Time: Nov 19 7:23 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	442482	40.00000	ppb	0.00
20) Naphthalene-D8 (IS)	6.59	136	1926464	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	1086391	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.35	188	1979273	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.45	240	1810891	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.20	264	1040059	40.00000	ppb	0.00

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.64	112	2405608	5219.52741	ppb	0.00
Spiked Amount 6493.506			Recovery	= 80.381%		
5) Phenol-D6 (S)	4.78	99	3210332	5549.35819	ppb	0.00
Spiked Amount 6493.506			Recovery	= 85.460%		
21) Nitrobenzene-D5 (S)	5.79	82	1378653	2652.30000	ppb	0.00
Spiked Amount 3246.753			Recovery	= 81.691%		
45) 2-Fluorobiphenyl (S)	7.84	172	2178530	1981.43317	ppb	0.00
Spiked Amount 3246.753			Recovery	= 61.028%		
63) 2,4,6-Tribromophenol (S)	9.55	330	723248	5415.63005	ppb	0.00
Spiked Amount 6493.506			Recovery	= 83.401%		
81) Terphenyl-D14 (S)	12.23	244	3369068	2485.02358	ppb	0.00
Spiked Amount 3246.753			Recovery	= 76.539%		

Target Compounds

				Qvalue
2) n-Nitrosodimethylamine	1.91	42	168431	1332.94561
3) Pyridine	1.96	79	97093	302.16502
6) Phenol	4.79	94	950923	1341.32663
7) Aniline	4.80	93	611512	953.06229
8) Bis (2-chloroethyl) ether	4.87	93	686231	1389.47561
9) 2-Chlorophenol	4.93	128	726305	1354.87246
10) 1,3-DCB	5.10	146	617924	1060.80857
11) 1,4-DCB	5.18	146	644577	1077.81183
12) Benzyl alcohol	5.33	108	433004	1397.14497
13) 1,2-DCB	5.35	146	622834	1123.16744
14) 2-Methylphenol	5.46	107	601093	1367.80040
15) Bis (2-chloroisopropyl) et	5.47	45	777633	1356.32095
16) Acetophenone	5.62	105	913349	1389.26549
17) 3&4-Methylphenol	5.64	107	1633370	2762.98402
18) n-Nitrosodi-n-propylamine	5.63	70	528688	1419.92293
19) Hexachloroethane	5.72	117	211096	1019.78544
22) Nitrobenzene	5.81	77	780314	1389.10766
23) Isophorone	6.08	82	1398450	1427.79837
24) 2-Nitrophenol	6.16	139	425004	1407.29077
25) 2,4-Dimethylphenol	6.22	122	619089	1303.09884
26) Benzoic acid	6.36	105	459812	1326.76271
27) Bis (2-chloroethoxy) metha	6.32	93	796377	1375.03766
28) 2,4-Dichlorophenol	6.44	162	594020	1383.75164
29) 1,2,4-Trichlorobenzene	6.53	180	566409	1184.51624
30) 3,4-Dimethylphenol	6.56	107	971941	1366.64635
31) Naphthalene	6.62	128	1990909	1209.21777
32) 4-Chloroaniline	6.69	127	768713	1312.24387
33) 2,6-Dichlorophenol	6.69	162	590429	1365.50924
34) Hexachloropropene	6.71	213	357698	1149.10427
35) Hexachlorobutadiene	6.76	225	284043	1113.41136
36) Caprolactum	7.10	55	289071	1421.34797
37) 4-Chloro-3-methylphenol	7.26	107	680577	1429.49486

(#) = qualifier out of range (m) = manual integration

1117Y064.D Y1117.M Thu Nov 19 08:02:07 2015

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y064.D
 Acq On : 18 Nov 15 21:00
 Sample : AZ24401S03 MS-1 1/30.80G
 Misc : soil

Vial: 64
 Operator: MA
 Inst : Yoda
 Multiplr: 32.47

Quant Time: Nov 19 7:23 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.41	142	1311458	1234.86335	ppb	100
39) 1-Methylnaphthalene	7.53	142	1319213	1239.47241	ppb	100
41) Hexachlorocyclopentadiene	7.59	237	241664	937.49537	ppb	98
42) 1,2,4,5-Tetrachlorobenzene	7.60	216	565530	1215.78441	ppb	98
43) 2,4,6-Trichlorophenol	7.74	196	444573	1387.31440	ppb	99
44) 2,4,5-Trichlorophenol	7.80	196	468884	1361.57500	ppb	94
46) 1,1'-Biphenyl	7.96	154	1646824	1223.61302	ppb	98
47) 2-Chloronaphthalene	7.97	162	1254696	1238.43657	ppb	97
48) 2-Nitroaniline	8.10	65	439282	1487.14693	ppb	89
49) Dimethyl phthalate	8.32	163	1593127	1374.66494	ppb	99
50) 2,6-DNT	8.39	165	378871	1401.26496	ppb	86
51) Acenaphthylene	8.46	152	2149055	1253.96865	ppb	99
52) 3-Nitroaniline	8.59	138	407082	1365.45320	ppb	91
53) Acenaphthene	8.66	154	1260311	1251.53493	ppb	99
54) 2,4-Dinitrophenol	8.71	184	208631	1289.13933	ppb	94
55) 4-Nitrophenol	8.80	65	290066	1412.00384	ppb	86
56) Dibenzofuran	8.86	168	1807705	1240.04164	ppb	96
57) 2,4-DNT	8.86	165	519719	1383.97815	ppb	90
58) 2,3,4,6-Tetrachlorophenol	9.00	232	362681	1379.73944	ppb	95
59) Diethyl phthalate	9.14	149	1489657	1280.02937	ppb	97
60) 4-Chlorophenyl phenyl ethe	9.26	204	716987	1252.35513	ppb	88
61) Fluorene	9.26	166	1520574	1243.84256	ppb	100
62) 4-Nitroaniline	9.31	138	411166	1421.25932	ppb	89
65) 4,6-Dinitro-2-methylphenol	9.34	198	319541	1320.30652	ppb	# 76
66) Diphenyl amine	9.41	169	2421333	2530.00506	ppb	100
67) n-Nitrosodiphenylamine	9.41	169	2421333	2530.00506	ppb	100
68) 1,2-Diphenylhydrazine	9.45	77	1459982	1249.51503	ppb	# 87
69) 4-Bromophenyl phenyl ether	9.83	248	394232	1280.37924	ppb	93
70) Hexachlorobenzene	9.90	284	412463	1287.18314	ppb	# 89
71) Atrazine	10.04	200	211356	700.10728	ppb	98
72) Pentachlorophenol	10.14	266	255072	1404.73569	ppb	100
73) Phenanthrene	10.38	178	2264963	1276.09983	ppb	99
74) Anthracene	10.44	178	2321907	1267.02695	ppb	100
75) Carbazol	10.64	167	2162891	1347.97937	ppb	99
76) Di-n-butylphthalate	11.05	149	2536902	1321.62050	ppb	99
77) Fluoranthene	11.77	202	2355035	1287.95380	ppb	99
80) Pyrene	12.03	202	2443373	1273.30246	ppb	99
82) Butyl benzylphthalate	12.80	149	1120338	1329.64011	ppb	77
83) 3,3'-Dichlorobenzidine	13.41	252	652606	1255.17242	ppb	99
84) Benz (a) anthracene	13.43	228	2274897	1270.33092	ppb	99
85) Bis (2-ethylhexyl) phthalate	13.46	149	1693846	1363.28647	ppb	98
86) Chrysene	13.48	228	2218019	1267.88942	ppb	100
87) Di-n-octylphthalate	14.19	149	2802970	1376.74356	ppb	99
89) Benzo (b) fluoranthene	14.69	252	2235004	1346.61881	ppb	100
90) Benzo (k) fluoranthene	14.72	252	1906064	1271.05522	ppb	99
91) Benzo (a) pyrene	15.11	252	1946350	1312.00871	ppb	# 96
92) Indeno (1,2,3-cd) pyrene	16.92	276	2222231	1296.53205	ppb	98
93) Dibenz (a,h) anthracene	16.96	278	1998723	1335.71671	ppb	98
94) Benzo (g,h,i) perylene	17.45	276	1863946	1282.81497	ppb	99

(#) = qualifier out of range (m) = manual integration
 1117Y064.D Y1117.M Thu Nov 19 08:02:08 2015

Quantitation Report

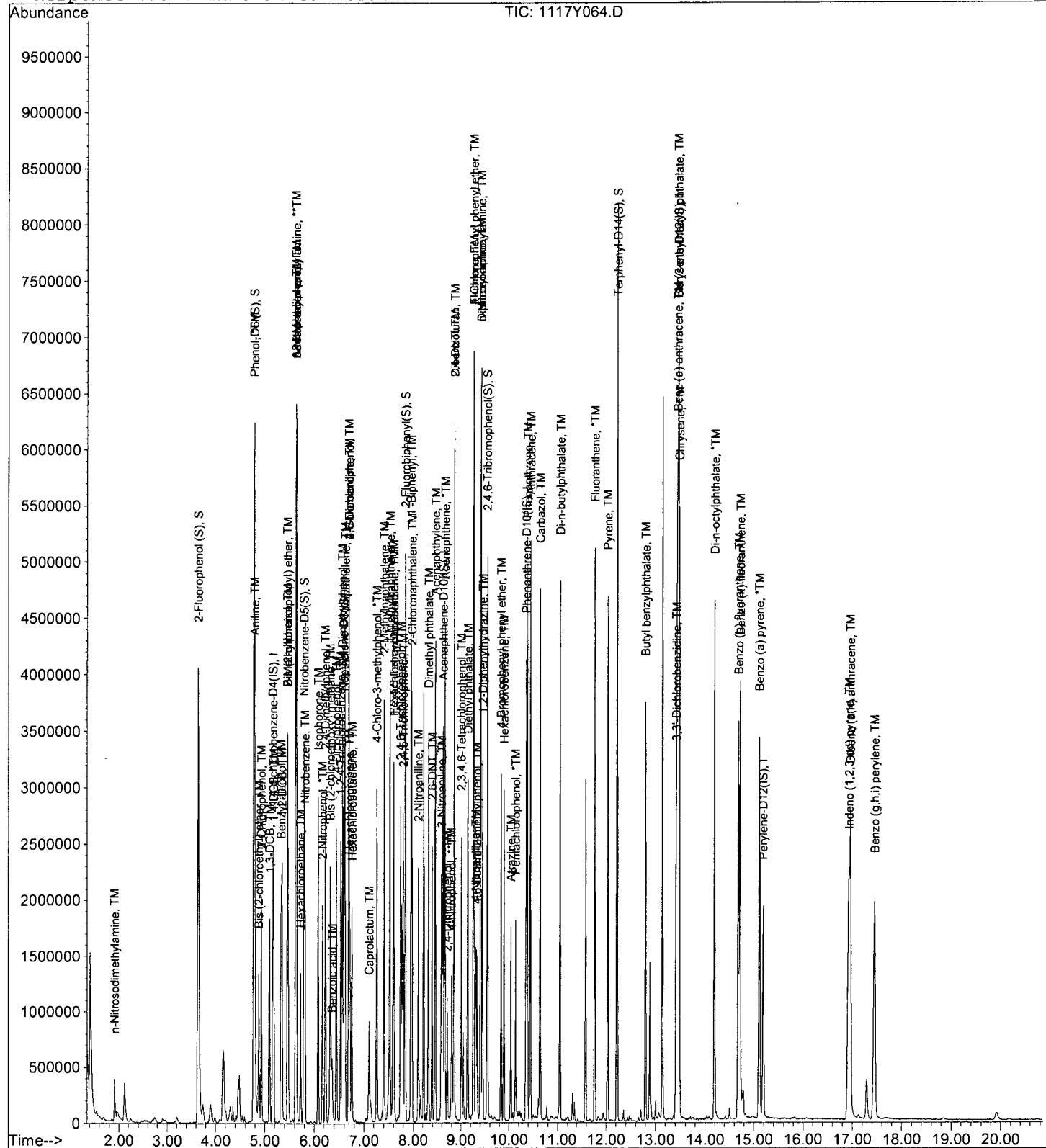
Data File : M:\YODA\DATA\Y151117\1117Y064.D
 Acq On : 18 Nov 15 21:00
 Sample : AZ24401S03 MS-1 1/30.80G
 Misc : soil

Vial: 64
 Operator: MA
 Inst : Yoda
 Multiplr: 32.47

Quant Time: Nov 19 7:23 2015

Quant Results File: Y1117.RES

Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y065.D Vial: 65
 Acq On : 18 Nov 15 21:29 Operator: MA
 Sample : AZ24401S03 MSD-1 1/30.93G Inst : Yoda
 Misc : soil Multiplr: 32.33

Quant Time: Nov 19 7:23 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) 1,4-dichlorobenzene-D4 (IS)	5.16	152	449817	40.00000	ppb	0.00
20) Napthalene-D8 (IS)	6.60	136	1932490	40.00000	ppb	0.00
40) Acenaphthene-D10 (IS)	8.62	164	1063422	40.00000	ppb	0.00
64) Phenanthrene-D10 (IS)	10.36	188	1979883	40.00000	ppb	0.00
78) Chrysene-D12 (IS)	13.45	240	1766353	40.00000	ppb	0.00
88) Perylene-D12 (IS)	15.19	264	1026406	40.00000	ppb	0.00

System Monitoring Compounds

4) 2-Fluorophenol (S)	3.64	112	2223390	4725.55195	ppb	0.00
Spiked Amount 6466.214			Recovery	= 73.081%		
5) Phenol-D6 (S)	4.78	99	2969131	5027.50765	ppb	0.00
Spiked Amount 6466.214			Recovery	= 77.750%		
21) Nitrobenzene-D5 (S)	5.79	82	1289794	2463.21601	ppb	0.00
Spiked Amount 3233.107			Recovery	= 76.187%		
45) 2-Fluorobiphenyl (S)	7.84	172	2255135	2086.60275	ppb	0.00
Spiked Amount 3233.107			Recovery	= 64.539%		
63) 2,4,6-Tribromophenol (S)	9.55	330	686250	5227.51697	ppb	0.00
Spiked Amount 6466.214			Recovery	= 80.844%		
81) Terphenyl-D14 (S)	12.22	244	3100398	2334.66097	ppb	0.00
Spiked Amount 3233.107			Recovery	= 72.211%		

Target Compounds

				Qvalue
2) n-Nitrosodimethylamine	1.91	42	151694	1175.95140 ppb 95
3) Pyridine	1.95	79	90128	274.75561 ppb 98
6) Phenol	4.79	94	883962	1221.38720 ppb 94
7) Aniline	4.80	93	635379	970.01786 ppb 91
8) Bis (2-chloroethyl) ether	4.88	93	607899	1205.70925 ppb 98
9) 2-Chlorophenol	4.93	128	680148	1242.83472 ppb 97
10) 1,3-DCB	5.09	146	607959	1022.36699 ppb 99
11) 1,4-DCB	5.18	146	630320	1032.42806 ppb 99
12) Benzyl alcohol	5.33	108	412342	1303.27993 ppb 97
13) 1,2-DCB	5.35	146	607852	1073.74366 ppb 99
14) 2-Methylphenol	5.46	107	562170	1253.08143 ppb 98
15) Bis (2-chloroisopropyl) et	5.47	45	739166	1262.87493 ppb # 84
16) Acetophenone	5.62	105	857368	1277.45712 ppb 86
17) 3&4-Methylphenol	5.63	107	1511546	2504.64245 ppb 95
18) n-Nitrosodi-n-propylamine	5.62	70	491448	1292.92538 ppb 98
19) Hexachloroethane	5.73	117	208867	988.39196 ppb 93
22) Nitrobenzene	5.81	77	724250	1279.88067 ppb 100
23) Isophorone	6.08	82	1308308	1326.00270 ppb 96
24) 2-Nitrophenol	6.16	139	397594	1306.90830 ppb # 84
25) 2,4-Dimethylphenol	6.22	122	533604	1114.95623 ppb 97
26) Benzoic acid	6.36	105	429622	1241.63547 ppb 96
27) Bis (2-chloroethoxy) metha	6.33	93	748780	1283.40755 ppb 99
28) 2,4-Dichlorophenol	6.44	162	557425	1289.01507 ppb 95
29) 1,2,4-Trichlorobenzene	6.53	180	551243	1144.37518 ppb 99
30) 3,4-Dimethylphenol	6.56	107	900331	1256.70377 ppb 95
31) Naphthalene	6.62	128	1944222	1172.23162 ppb 99
32) 4-Chloroaniline	6.69	127	744890	1262.28360 ppb 95
33) 2,6-Dichlorophenol	6.69	162	556871	1278.48617 ppb 97
34) Hexachloropropene	6.72	213	345025	1100.29202 ppb 98
35) Hexachlorobutadiene	6.76	225	274090	1066.54509 ppb 99
36) Caprolactum	7.10	55	275234	1343.42195 ppb 96
37) 4-Chloro-3-methylphenol	7.26	107	642691	1340.05314 ppb 93

(#) = qualifier out of range (m) = manual integration

1117Y065.D Y1117.M Thu Nov 19 08:02:13 2015

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y151117\1117Y065.D Vial: 65
 Acq On : 18 Nov 15 21:29 Operator: MA
 Sample : AZ24401S03 MSD-1 1/30.93G Inst : Yoda
 Misc : soil Multiplr: 32.33

Quant Time: Nov 19 7:23 2015

Quant Results File: Y1117.RES

Quant Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)
 Title : EPA 8270C
 Last Update : Wed Nov 18 07:36:25 2015
 Response via : Initial Calibration
 DataAcq Meth : SVOC416

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38) 2-Methylnaphthalene	7.42	142	1267403	1184.65998	ppb	100
39) 1-Methylnaphthalene	7.53	142	1273609	1187.87990	ppb	100
41) Hexachlorocyclopentadiene	7.59	237	223753	892.17635	ppb	100
42) 1,2,4,5-Tetrachlorobenzene	7.60	216	544352	1190.50738	ppb	98
43) 2,4,6-Trichlorophenol	7.75	196	416908	1323.49829	ppb	99
44) 2,4,5-Trichlorophenol	7.80	196	445811	1316.97728	ppb	# 91
46) 1,1'-Biphenyl	7.95	154	1582699	1196.31783	ppb	99
47) 2-Chloronaphthalene	7.97	162	1191258	1196.16869	ppb	95
48) 2-Nitroaniline	8.10	65	415723	1431.74564	ppb	85
49) Dimethyl phthalate	8.32	163	1520709	1334.88520	ppb	98
50) 2,6-DNT	8.39	165	353591	1330.39758	ppb	# 80
51) Acenaphthylene	8.46	152	2050461	1217.14412	ppb	99
52) 3-Nitroaniline	8.59	138	386808	1319.90208	ppb	86
53) Acenaphthene	8.66	154	1194968	1207.18233	ppb	99
54) 2,4-Dinitrophenol	8.72	184	193388	1226.29356	ppb	89
55) 4-Nitrophenol	8.81	65	268305	1328.67622	ppb	93
56) Dibenzofuran	8.86	168	1696443	1183.85722	ppb	97
57) 2,4-DNT	8.85	165	499523	1353.21709	ppb	84
58) 2,3,4,6-Tetrachlorophenol	9.01	232	340468	1317.64956	ppb	94
59) Diethyl phthalate	9.14	149	1423099	1243.99924	ppb	98
60) 4-Chlorophenyl phenyl ethe	9.26	204	669412	1189.49072	ppb	93
61) Fluorene	9.26	166	1448604	1205.47686	ppb	99
62) 4-Nitroaniline	9.31	138	411750	1447.90839	ppb	92
65) 4,6-Dinitro-2-methylphenol	9.34	198	303349	1253.65947	ppb	# 81
66) Diphenyl amine	9.41	169	2312544	2405.43638	ppb	99
67) n-Nitrosodiphenylamine	9.41	169	2312544	2405.43638	ppb	99
68) 1,2-Diphenylhydrazine	9.45	77	1402397	1194.81855	ppb	94
69) 4-Bromophenyl phenyl ether	9.84	248	366715	1185.63886	ppb	89
70) Hexachlorobenzene	9.89	284	381063	1183.82942	ppb	# 81
71) Atrazine	10.03	200	204916	675.71395	ppb	98
72) Pentachlorophenol	10.14	266	226673	1242.70665	ppb	99
73) Phenanthrene	10.39	178	2130906	1195.15665	ppb	99
74) Anthracene	10.44	178	2203302	1196.88400	ppb	100
75) Carbazol	10.64	167	2069535	1283.98039	ppb	97
76) Di-n-butylphthalate	11.05	149	2338062	1212.54007	ppb	99
77) Fluoranthene	11.77	202	2192534	1193.67543	ppb	97
80) Pyrene	12.04	202	2296716	1221.89740	ppb	99
82) Butyl benzylphthalate	12.80	149	1029274	1247.10115	ppb	89
83) 3,3'-Dichlorobenzidine	13.41	252	622469	1222.23774	ppb	# 99
84) Benz (a) anthracene	13.43	228	2123874	1210.79193	ppb	99
85) Bis (2-ethylhexyl) phthala	13.46	149	1524090	1252.30309	ppb	96
86) Chrysene	13.48	228	2022245	1180.14542	ppb	99
87) Di-n-octylphthalate	14.19	149	2503194	1255.20526	ppb	98
89) Benzo (b) fluoranthene	14.68	252	2032359	1235.59579	ppb	99
90) Benzo (k) fluoranthene	14.72	252	1749190	1176.99210	ppb	100
91) Benzo (a) pyrene	15.12	252	1776616	1208.42297	ppb	100
92) Indeno (1,2,3-cd) pyrene	16.92	276	2023586	1191.31153	ppb	99
93) Dibenz (a,h) anthracene	16.96	278	1838179	1239.53608	ppb	99
94) Benzo (g,h,i) perylene	17.45	276	1694516	1176.75483	ppb	99

(#) = qualifier out of range (m) = manual integration
 1117Y065.D Y1117.M Thu Nov 19 08:02:14 2015

Quantitation Report

Data File : M:\YODA\DATA\Y151117\1117Y065.D
 Acc On : 18 Nov 15 21:29
 Sample : AZ24401S03 MSD-1 1/30. 93G
 Misc : soil

Quant Time: Nov 19 7:23 2015

Quant Results File: Y1117.RES

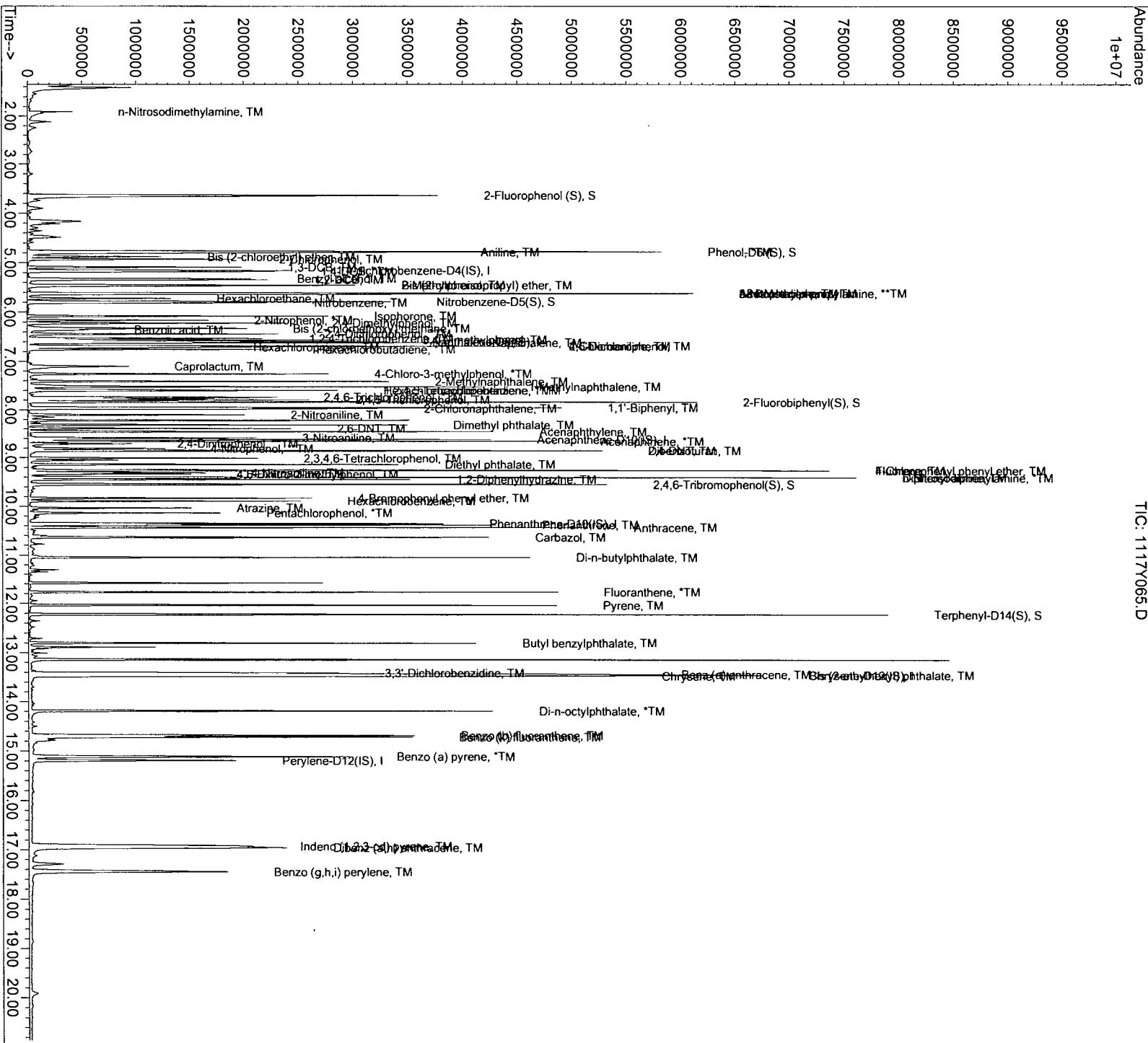
Method : M:\YODA\DATA\Y151117\Y1117.M (RTE Integrator)

Title : EPA 8270C

Last Update : Wed Nov 18 07:36:25 2015

Response via : Initial Calibration

TIC: 1117Y065.D

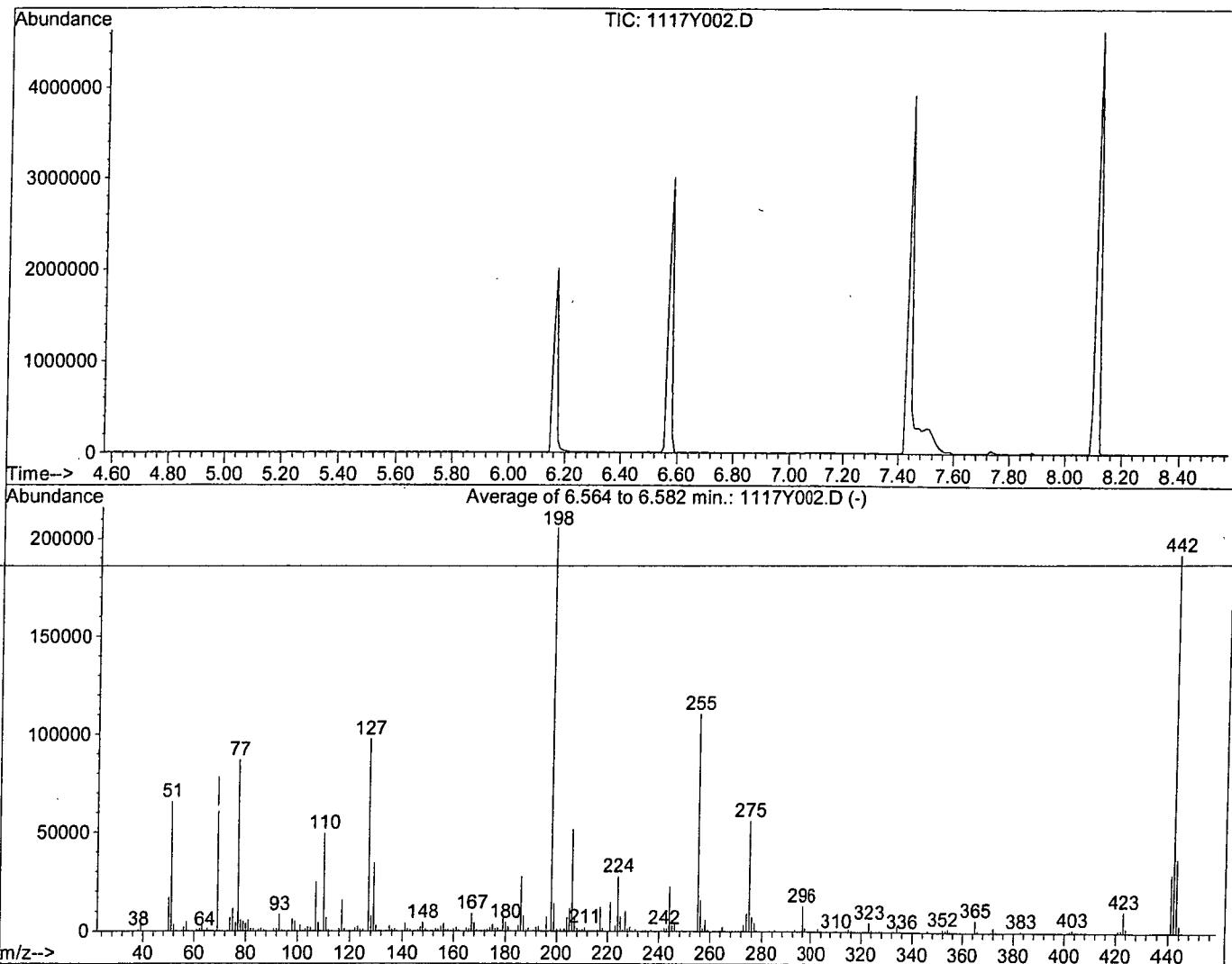


DFTPP

Data File : M:\YODA\DATA\Y151117\1117Y002.D
 Acq On : 17 Nov 15 11:52
 Sample : SV Tune 11/16/15
 Misc :

Vial: 2
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Method : M:\YODA\DATA\Y151117\DFTPP2.M (Chemstation Integrator)
 Title :



AutoFind: Scans 321, 322, 323; Background Corrected with Scan 317

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.0	65851	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	78286	PASS
70	69	0.00	2	0.6	453	PASS
127	198	40	60	47.5	97731	PASS
197	198	0.00	1	0.2	508	PASS
198	198	100	100	100.0	205812	PASS
199	198	5	9	6.7	13877	PASS
275	198	10	30	27.3	56160	PASS
365	198	1	100	3.0	6119	PASS
441	443	0.01	100	79.5	29626	PASS
442	198	40	150	93.8	193011	PASS
443	442	17	23	19.3	37251	PASS

M:\YODA\DATA\Y151117\1117Y002.D

Data File Name: 1117Y002.D
Data File Path: M:\YODA\DATA\Y151117\
Operator: MA
Date Acquired: 17 Nov 2015 11:52
Method File: DFTPP2.M
Sample Name: SV Tune 11/16/15
Vial Number: 2
Instrument Name: Yoda

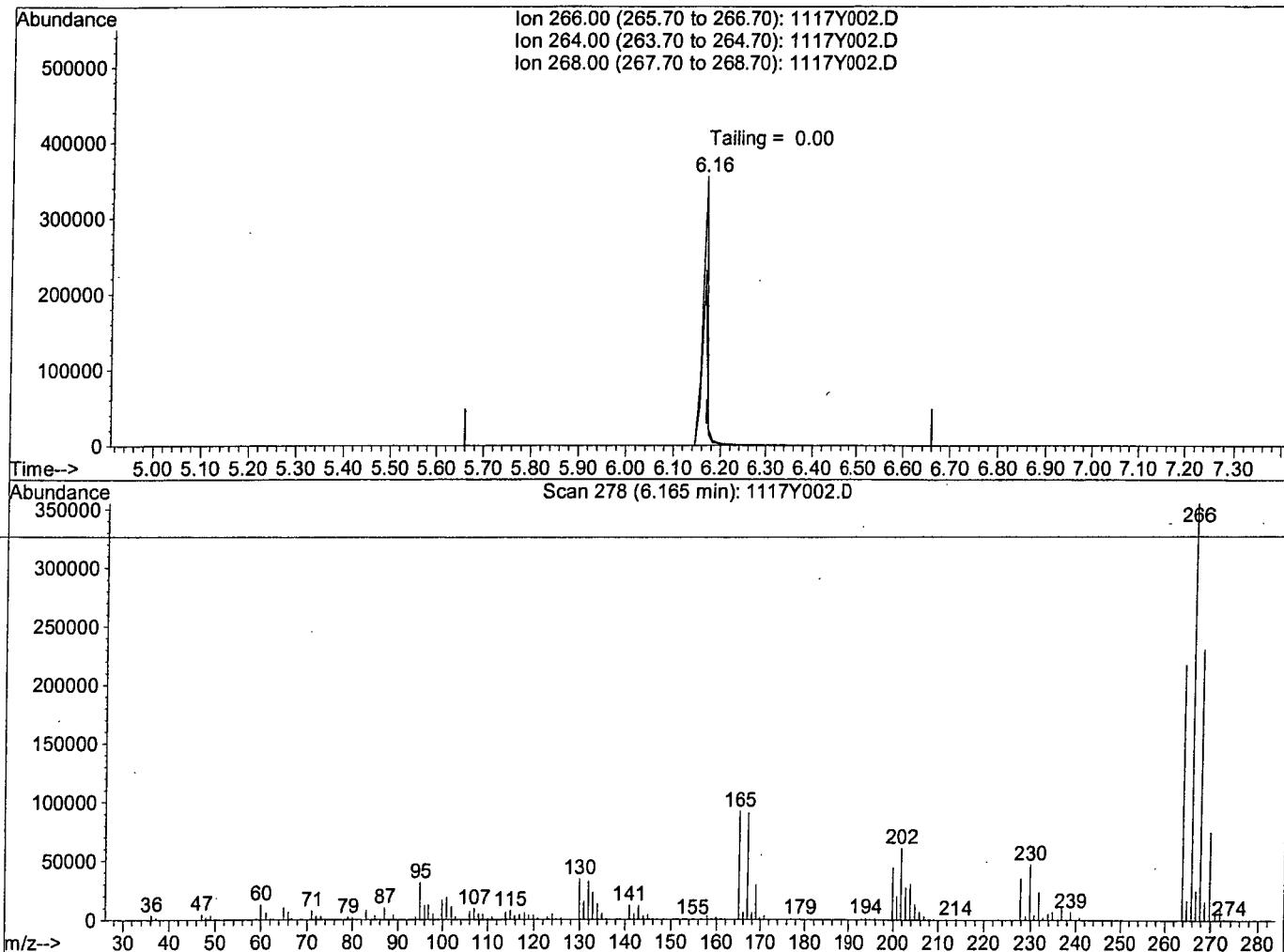
#	Name	Ret Time	Target Response
1)	DDT	8.11	43002500
2)	DDD	7.88	305380
3)	DDE	7.88	274799

Breakdown 1.33

Quantitation Report

Data File : M:\YODA\DATA\Y151117\1117Y002.D Vial: 2
 Acq On : 17 Nov 15 11:52 Operator: MA
 Sample : SV Tune 11/16/15 Inst : Yoda
 Misc : Multiplr: 1.00
 Quant Time: Nov 18 7:22 2015 Quant Results File: temp.res

Method : M:\YODA\DATA\Y151117\DFTPP2.M (Chemstation Integrator)
 Title :
 Last Update : Wed Nov 18 07:22:34 2015
 Response via : Single Level Calibration



TIC: 1117Y002.D

(5) Pentachlorophenol

6.17min 0.0000

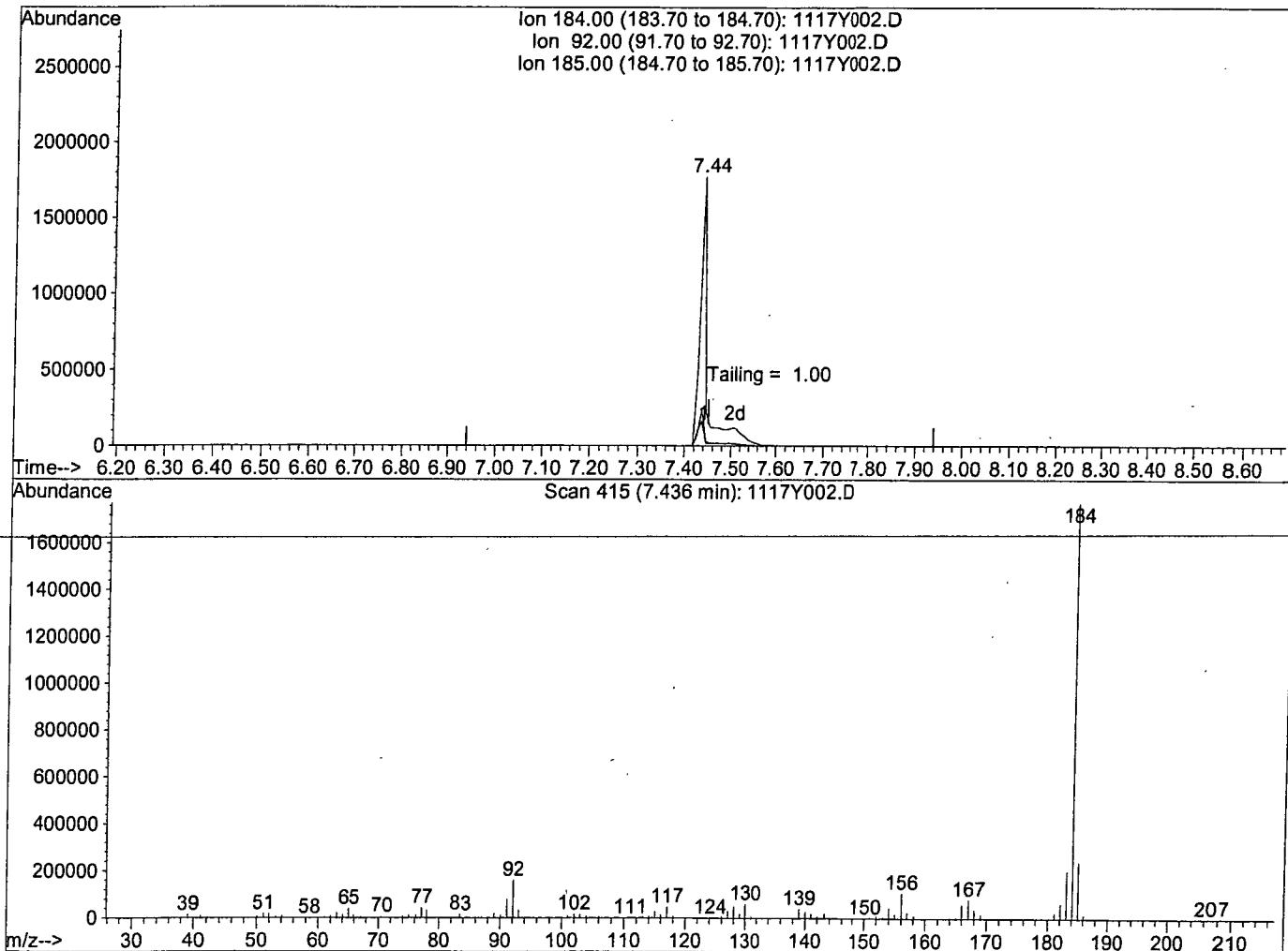
response 2692559

Ion	Exp%	Act%
266.00	100	100
264.00	61.90	61.88
268.00	62.40	64.20
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y151117\1117Y002.D Vial: 2
 Acq On : 17 Nov 15 11:52 Operator: MA
 Sample : SV Tune 11/16/15 Inst : Yoda
 Misc : Multiplr: 1.00
 Quant Time: Nov 18 7:22 2015 Quant Results File: temp.res

Method : M:\YODA\DATA\Y151117\DFTPP2.M (Chemstation Integrator)
 Title :
 Last Update : Wed Nov 18 07:22:34 2015
 Response via : Single Level Calibration



TIC: 1117Y002.D

(6) Benzidine

7.44min 0.0000

response 16504228

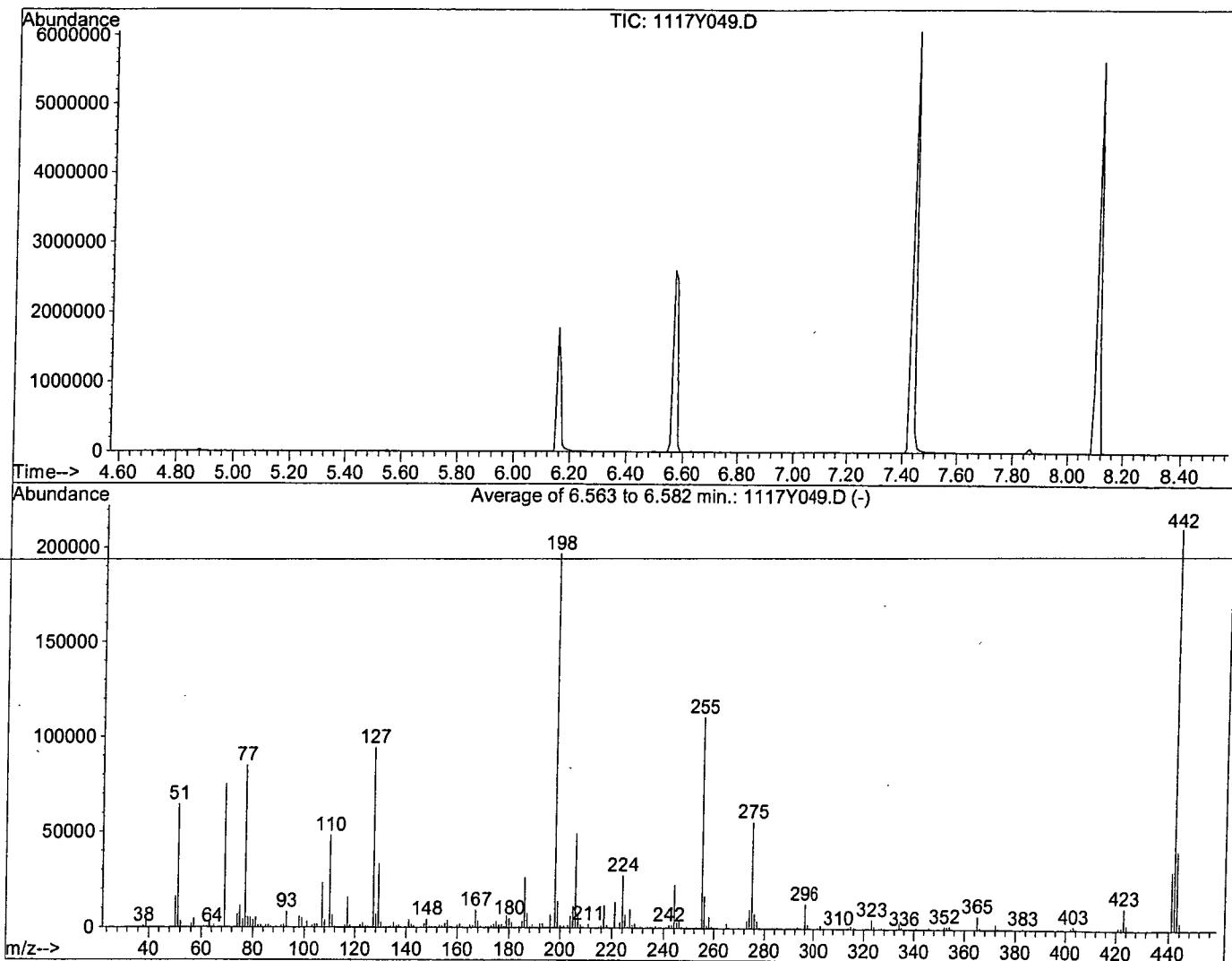
Ion	Exp%	Act%
184.00	100	100
92.00	6.80	8.76
185.00	13.40	11.44
0.00	0.00	0.00

DFTPP

Data File : M:\YODA\DATA\Y151117\1117Y049.D
 Acq On : 18 Nov 15 13:55
 Sample : SV TUNE 11/16/15
 Misc : soil

Vial: 49
 Operator: MA
 Inst : Yoda
 Multiplr: 1.00

Method : M:\YODA\DATA\Y151117\DFTPP2.M (Chemstation Integrator)
 Title :



AutoFind: Scans 321, 322, 323; Background Corrected with Scan 317

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.8	64701	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	75346	PASS
70	69	0.00	2	0.4	339	PASS
127	198	40	60	48.0	94522	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	197030	PASS
199	198	5	9	7.0	13715	PASS
275	198	10	30	28.3	55789	PASS
365	198	1	100	3.5	6831	PASS
441	443	0.01	100	74.1	30519	PASS
442	198	40	150	107.4	211648	PASS
443	442	17	23	19.5	41198	PASS

M:\YODA\DATA\Y151117\1117Y049.D

Data File Name: 1117Y049.D
Data File Path: M:\YODA\DATA\Y151117\
Operator: MA
Date Acquired: 18 Nov 2015 13:55
Method File: DFTPP2.M
Sample Name: SV TUNE 11/16/15
Vial Number: 49
Instrument Name: Yoda

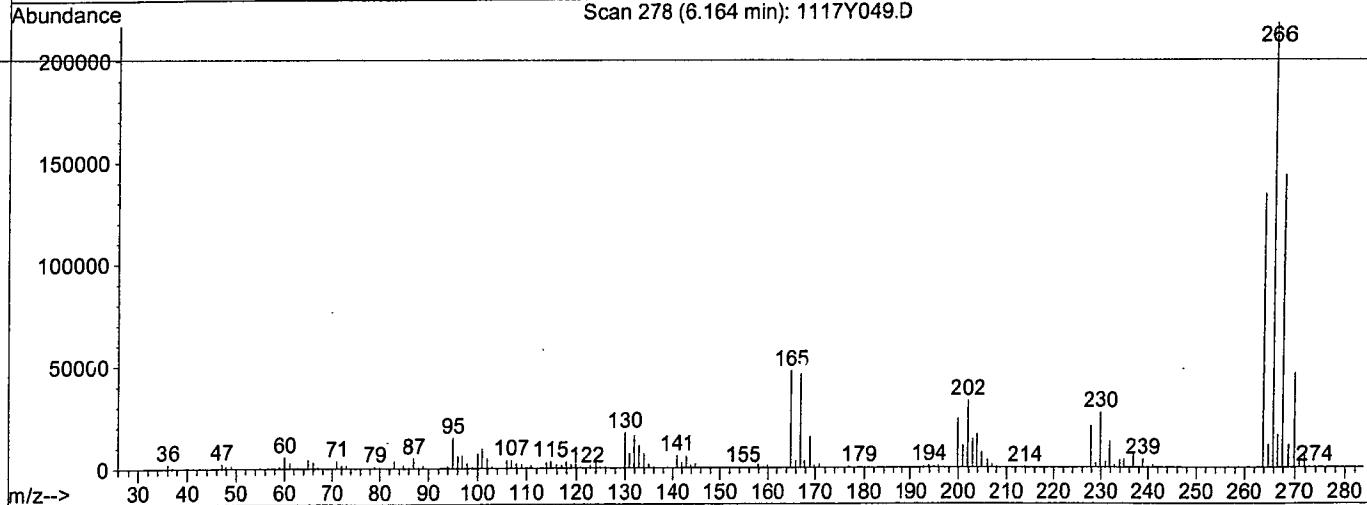
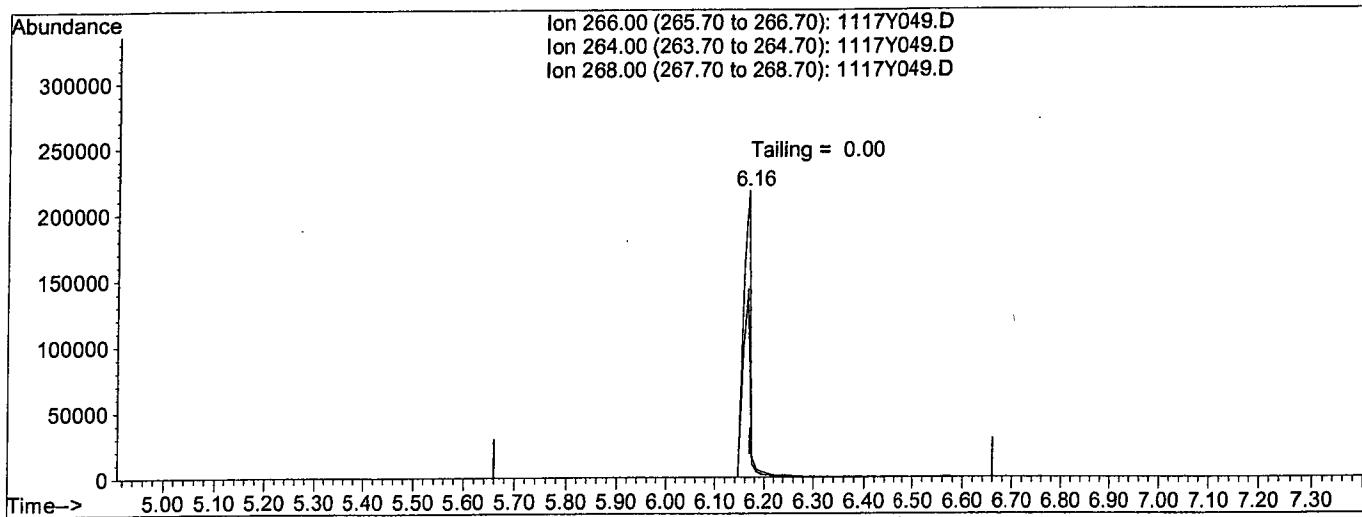
#	Name	Ret Time	Target Response
1)	DDT	8.11	43915900
2)	DDD	7.88	728392
3)	DDE	7.88	539427

Breakdown **2.81**

Quantitation Report

Data File : M:\YODA\DATA\Y151117\1117Y049.D Vial: 49
 Acq On : 18 Nov 15 13:55 Operator: MA
 Sample : SV TUNE 11/16/15 Inst : Yoda
 Misc : soil Multiplr: 1.00
 Quant Time: Nov 18 15:17 2015 Quant Results File: temp.res

Method : M:\YODA\DATA\Y151117\DFTPP2.M (Chemstation Integrator)
 Title :
 Last Update : Wed Nov 18 07:22:34 2015
 Response via : Single Level Calibration



TIC: 1117Y049.D

(5) Pentachlorophenol

6.17min 0.0000

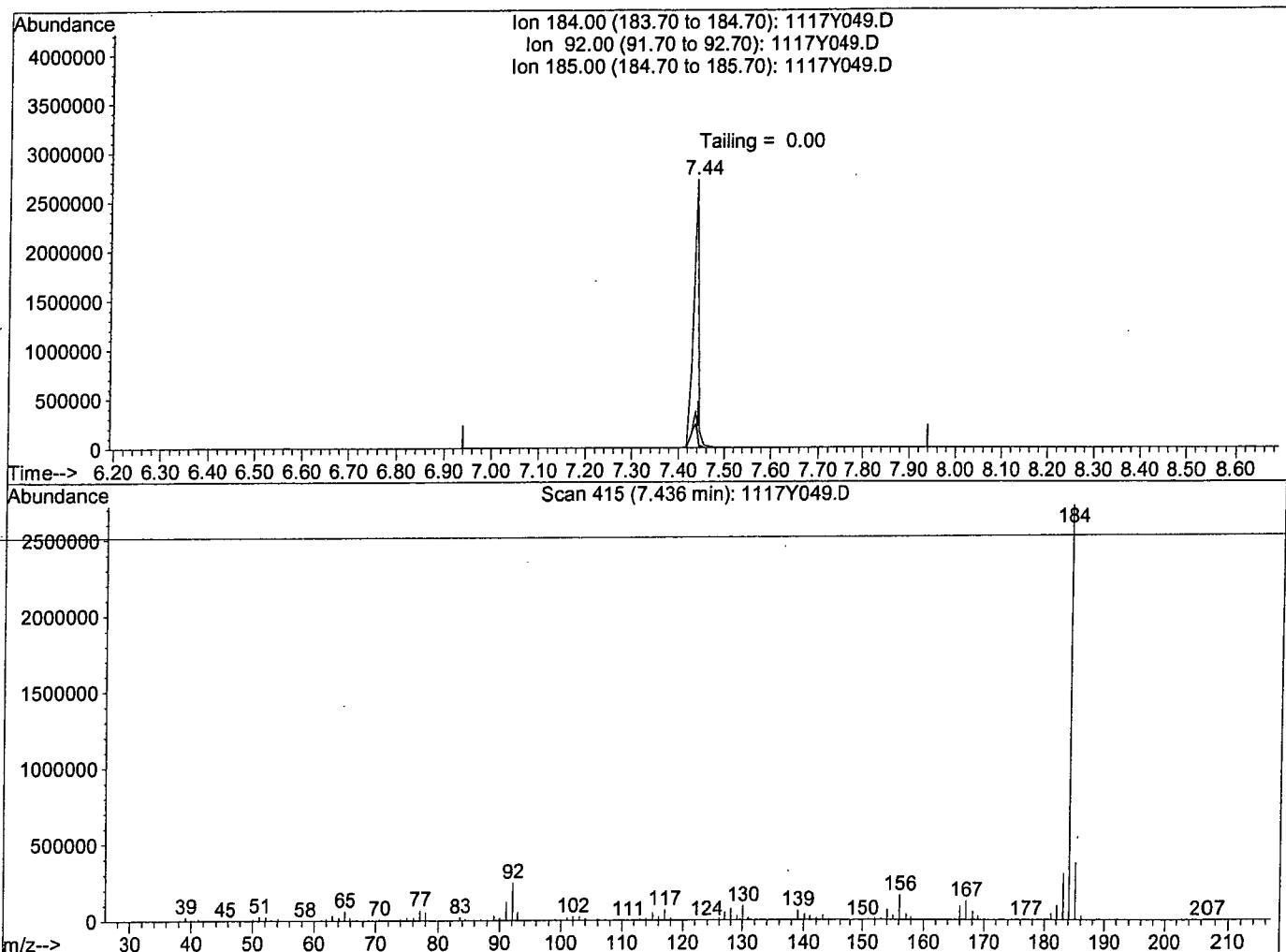
response 2294696

Ion	Exp%	Act%
266.00	100	100
264.00	61.90	61.78
268.00	62.40	64.67
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y151117\1117Y049.D Vial: 49
Acq On : 18 Nov 15 13:55 Operator: MA
Sample : SV TUNE 11/16/15 Inst : Yoda
Misc : soil Multiplr: 1.00
Quant Time: Nov 18 15:17 2015 Quant Results File: temp.res

Method : M:\YODA\DATA\Y151117\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Nov 18 07:22:34 2015
Response via : Single Level Calibration



TIC: 1117Y049.D

(6) Benzidine

7.44min 0.0000

response 21094114

Ion Exp% Act%

184.00 100 100

92.00 6.80 10.37#

185.00 13.40 13.80

0.00 0.00 0.00

OCL-OP Soil Surrogate					
Standard	Initial Conc	Source dat	Aliquot	Final VOL	Final Conc
TCMX	5000ug/ml	O2SI	800ul	200ml	20ug/ml
DBC	Cat: 130070-02				120214C
DECA	Lot: 13973-35488				
	open: 10/21/15				
	exp: 08/30/16				
TBP	1000ug/ml	O2SI	1000ul		5ug/ml
TPP	cat: 130161-02				
	lot: 51883-35221				
	open: 10/23/15				
	exp: 10/23/16				

			PAC ECO CAL STD			
DIAZINON	5ug/ml		200ug/ml		250ul	O2SI 10ml
DISULFOTON	5		200			HEXANE
MALATHION	5		200		CAT	130169-01
MOLINATE	5		200		LOT	LOT#219402-33209 050615C
PHORATE	5		200		OP	07/21/15
THIOBENCARB	5		200		EXP	07/21/16
TRIBUTYL PHOSPHATE	5		200			
DEMETON	5		200			
DISCHLORVOS	5		200			
EPTC	5		200			
PARATHION	5		200			
AZINPHOS METHYL	5		200			
CHLORPYRIFOS	5		200			
DIMETHOATE	5		200			
METHIDATHION	5		200			
METHYL PARATHION	5		200			
ATRAZINE	5		200			
CYANIZINE	6		200			
TRIPHENYL PHOSPHATE	5		200			
PENDIMETHALIN(PROWL)	5		200			
TRIFLURALIN	5		200			
SIMAZINE	5		200			
PHOSMET	5ug/ml		1000ug/ml		50ul	ABSOLUTE
						Part: 70798
						Lot: 042214-33799
						OP: 09/03/15
						EXP: 04/22/16

8270 SVOC Stock 10mL					
8270 Stock/Spike Standard					
prep:	10/23/15-LH				
Exp:	10/23/16				
		Conc.			
Supplier	ID #	ug/mL	Lot #	Open Date	Exp.Date
Absolute	10001	2000	053014-3552	10/23/15	10/23/16
Absolute	10002	2000	111114-3552	10/23/15	10/23/16
Absolute	10004	2000	110815-3552	10/23/15	10/23/16
Absolute	10005	2000	10314-3553	10/23/15	10/23/16
Absolute	10006	2000	042915-3554	10/23/15	10/23/16
Absolute	10007	2000	20515-3555	10/23/15	10/23/16
Absolute	10018	2000	020315-3555	10/23/15	10/23/16
Absolute	70023	1000	12114-3555	10/23/15	10/23/16
Absolute	82705	2000	031215-3556	10/23/15	10/23/16
Absolute	94552	2000	082914-3557	10/23/15	10/23/16
				Final Vol.	10000

PAC ECO CURVE					
prep: 10/23/15-L.H. exp: 04/23/16					
ID#	[ug/mL]	LOT #	DATE	EXP. DATE	µL
PAC ECO CAL STD	5		09/03/15	09/03/16	1a
					1b
					1
					2
					3
					4
					5
					6
Hexane		050615C		Final VOL.	1000
					1000
					1000
					1000
					1000
					1000

8270 BNA Surrogate Stock 10/23/15-L.H. Ex:10/23/16					
Supplier	ID #	Conc.	Lot #	Open Date	Exp.Date
O2SI	110004-17	200/400	248285-35792	10/23/15	10/23/16
				1000	

8270 Full Scan Standard Curve

PREP DATE:		10/23/15-L.H.														
8270 Standard Curve																
Exp:	09/30/16							5	10	20	40	50	60	80	100	
Supplier	ID #	Conc.	Date					µL	µL	µL	µL	µL	µL	µL	µL	
Absolute	8270 Stock	200	VAR	10/23/15	10/23/16			5	5	10	20	25	30	40	50	
O2si	8270 BN-A	200/400	248285-35792	10/23/15	10/23/16			5	5	10	20	25	30	40	50	
EM Science	Methylene Chloride	55006	11/06/14					190	90	80	60	50	40	20	0	
Supeico	SV Internal	2000	A10079V-3449	09/30/15	09/30/16			4	2	2	2	2	2	2	2	
			Final Vol.					204	102	102	102	102	102	102	102	

DOHS SURROGATE						
prep: 10/23/15-L.H. ex: 12/23/16						
Compound	Initial Conc	Stock Sourc	Aliquot	Final Vol.	Final Conc.	Salvent
Dibromoprop	100ug/mL	.3 DBP Stoc	625uL	10mL	6.25ug/mL	methanol
		Prep: 12/23/14				Lot # 021916C
		Exp: 12/23/15				

8270 Full Scan Second Source Stock

10/23/15-L.H.																
8270 Second Source Stock																
Exp:	07/22/16															
Supplier	ID #	Conc.	Date	Code	Date	Exp.	µL									
o2si	116070-02	2000	34696-3523	10/23/15	10/23/16	10/23/16	1000									
o2si	110391-01	2000	34693-3523	10/23/15	10/23/16	10/23/16	1000									
o2si	010337-01	1000	52134-3524	10/23/15	10/23/16	10/23/16	1000									
o2si	110396-01	2000	52136-3524	10/23/15	10/23/16	10/23/16	1000									
o2si	110397-01	2000	52137-3524	10/23/15	08/27/15	10/23/16	1000									*need to be QC
o2si	110393-01	2000	52141-3524	10/23/15	10/23/16	10/23/16	1000									
o2si	110394-01	2000	35110-3525	10/23/15	10/23/16	10/23/16	1000									
o2si	110395-01	2000	34697-3525	10/23/15	10/23/16	10/23/16	1000									
o2si	110392-01	2000	343259-3525	10/23/15	10/23/16	10/23/16	1000									
Absolute	10006	2000	61915-3529	07/22/15	07/22/16	07/22/16	1000									
				Final Vol.			10000									

8270 Full Scan Standard Curve

PREP DATE:		11/06/15-L.H.											
8270 Standard Curve													
Exp:	09/30/16					5	10	20	40	50	60	80	100
		Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
Absolute	8270 Stock	200	VAR	10/23/15	10/23/16	5	5	10	20	25	30	40	50
O2si	8270 BN:A Surrog	200/400	248285-35792	10/23/15	10/23/16	5	5	10	20	25	30	40	50
EM Science	Methylene Chloride	55006	11/06/14			190	90	80	60	50	40	20	0
Supelco	SV Internal Standard	2000	A10079V-3449	09/30/15	09/30/16	4	2	2	2	2	2	2	2
				Final Vol.		204	102	102	102	102	102	102	102

8270 Full Scan Second Source (SS)

PREP DATE:		11/06/15-L.H.											
		Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL							
O2si	8270 Stock SS	200	VAR	10/23/15	07/22/16	25							
EM Science	Methylene Chloride	55006	11/06/14			75							
Supelco	SV Internal Standard	2000	A10079V-3449	09/30/15	09/30/16	2							
				Final Vol.		102							

TCQ CURVE

						1	2	3	4	5	6		
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL		
VWR	TCQ STD	2		08/27/15	11/19/15	5	10	50	100	200	500		
	MTBE		50223				995	990	950	900	800	500	
				Final VOL.		1000	1000	1000	1000	1000	1000		

OPF 100/200 CCV

SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL							
VWR	OPF STD	5		08/18/15	01/17/16	100							
	HEXANE		080613A				100						
				Final VOL.		200							

MOTOR OIL CCV 1000ppm						
Prep: 11/17/15-L.H. Ex: 05/17/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MO STD.	2000 µg/mL	MO Std.	2500µL	5mL	1000 µg/ml	MC
PREP:	08/27/15				55006	
Exp:	08/27/16					
DIESEL CCV 400ug/ml						
Prep: 11/17/15-L.H. Ex: 05/17/16						
STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
DIESEL STD.	1000 µg/mL	Diesel Std.	2000µL	5mL	400 µg/ml	MC
PREP:	06/12/15				55006	
Exp:	06/02/16					

8270 Full Scan Standard Curve

PREP DATE:	11/17/15-L.H.											
8270 Standard Curve												
Exp:	09/30/16				5	10	20	40	50	60	80	100
	Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL
Absolute	8270 Stock	200	VAR	10/23/15	10/23/16	5	5	10	20	25	30	40
O2si	8270 BN:A Surrog	200/400	249285-35792	10/23/15	10/23/16	5	5	10	20	25	30	40
EM Science	Methylene Chloride		55006	11/06/14		190	90	80	60	50	40	20
Supleco	CRM48902	2000	A10079V-3550	11/13/15	11/13/16	2000	2	2	2	2	2	2
				Final Vol.		204	102	102	102	102	102	102

8270 Full Scan Second Source (SS)

PREP DATE:	11/17/15-L.H.											
	Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL						
O2si	8270 Stock SS	200	VAR	10/23/15	07/22/16	25						
EM Science	Methylene Chloride		55006	11/06/14		75						
Supleco	CRM48902	2000	A10079V-3550	11/13/15	11/13/16	2000						
				Final Vol.		102						

Organic Extraction Worksheet

Method	8270 Sonication Ext. Methylene c 3550	Extraction Set	151117A	Extraction Method	SON009	Units	mL
Spiked ID 1	8270T Spike 10-23-15 exp 10-23-16	Surrogate ID 1	8270 Surrogate 10-27-15 exp 10-27-16				
Spiked ID 2		Surrogate ID 2					
Spiked ID 3		Surrogate ID 3					
Spiked ID 4		Surrogate ID 4					
Spiked ID 5		Surrogate ID 5					
Spiked ID 6		Sufficient Vol for Matrix QC:	YES				
Spiked ID 7		Ext. Start Time:	11/17/15 12:50				
Spiked ID 8		Ext. End Time:	11/17/15 16:00				
		GC Requires Extract By:	12/02/15 0:00				
		pH1					Water Bath Temp Criteria 78,80 °C
		pH2					
		pH3					

Spiked By: IC

Date 11/17/15

Witnessed By: DL

Date 11/17/15

Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1|151117A Blk				1	1	30.01g	1	NA	11/17/15 12:50	
					equip	e-s5 E-WB7				
2|151117A LCS-1		0.250	1	1	1	30.10g	1	NA	11/17/15 12:50	
					equip	E-S4 E-WB7				
3|AZ24396	AZ24396S02			1	1	30.43g	1	NA	11/17/15 12:50	77838
					equip	E-S3.1 E-WB7				
4|AZ24397	AZ24397S01			1	1	30.26g	1	NA	11/17/15 12:50	77838
					equip	E-S2 E-WB7				
5|AZ24398	AZ24398S02			1	1	30.21g	1	NA	11/17/15 12:50	77838
					equip	E-S1.2 E-WB7				
6|AZ24399	AZ24399S02			1	1	30.72g	1	NA	11/17/15 12:50	77838
					equip	E-S1.1 E-WB7				
7|AZ24400	AZ24400S02			1	1	30.66g	1	NA	11/17/15 12:50	77838
					equip	E-S6 E-WB7				
8|AZ24401 MS-1	AZ24401S03	0.250	1	1	1	30.80g	1	NA	11/17/15 12:50	77838
					equip	E-S7 E-WB7				
9|AZ24401 MSD-1	AZ24401S03	0.250	1	1	1	30.93g	1	NA	11/17/15 12:50	77838
					equip	E-S4 E-WB6				
10|AZ24401	AZ24401S03			1	1	30.96g	1	NA	11/17/15 12:50	77838
					equip	E-S5 E-WB6				
11|AZ24767	AZ24767S04			1	1	30.01g	1	NA	11/17/15 12:50	77923 RUSH 1 WEEK
					equip	E-S3.1 E-WB6				
12|AZ24768	AZ24768S04			1	1	30.02g	1	NA	11/17/15 12:50	77923 RUSH 1 WEEK
					equip	E-S2 E-WB6				
13|AZ24772	AZ24772S02			1	1	30.39g	1	NA	11/17/15 12:50	77923 RUSH 1 WEEK
					equip	E-S1.2 E-WB6				
14|AZ24773	AZ24773S02			1	1	30.83g	1	NA	11/17/15 12:50	77923 RUSH 1 WEEK
					equip	E-S1.1 E-WB6				

KY 11/19/15

Solvent and Lot#	
B.Na2SO4	XE21G
MC	55097
Filter Paper	9638018
Acidified Na2SO4	9-29-15

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	LH
Date	11/17/15
Time	4:46
Refrigerator	GCC

Scanned By	Technician's Initials
Sample Preparation	IC
Extraction	IC
Concentration	IC
Modified	11/17/15 4:22:12 PM

Reviewed By:

KY 11/19/15

Ext_ID 125 49491

Injection Log

Directory: M:\YODA\DATA\Y151117\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1117Y002.D	1	SV Tune 11/16/15		17 Nov 15 11:52
2	3	1117Y003.D	1	5ug/ml SVOC 11/06/15		17 Nov 15 12:36
3	4	1117Y004.D	1	10ug/ml SVOC 11/06/15		17 Nov 15 13:04
4	5	1117Y005.D	1	20ug/ml SVOC 11/06/15		17 Nov 15 13:34
5	6	1117Y006.D	1	40ug/ml SVOC 11/06/15		17 Nov 15 14:03
6	7	1117Y007.D	1	50ug/ml SVOC 11/06/15		17 Nov 15 14:32
7	8	1117Y008.D	1	60ug/ml SVOC 11/06/15		17 Nov 15 15:01
8	9	1117Y009.D	1	80ug/ml SVOC 11/06/15		17 Nov 15 15:30
9	10	1117Y010.D	1	100ug/ml SVOC 11/06/15		17 Nov 15 16:00
10	11	1117Y011.D	1	50ug/ml SVOC (SS STD10/23/15)		17 Nov 15 16:29
11	49	1117Y049.D	1	SV TUNE 11/16/15		18 Nov 15 13:55
12	50	1117Y050.D	1	CCV: 50ug/ml SVOC 11/17/15		18 Nov 15 14:12
13	57	1117Y057.D	33.3222	151117A BLK 1/30.01G	soil	18 Nov 15 17:38
14	58	1117Y058.D	33.2226	151117A LCS-1 1/30.10G	soil	18 Nov 15 18:07
15	59	1117Y059.D	32.8623	AZ24396S02 1/30.43G	soil	18 Nov 15 18:36
16	60	1117Y060.D	33.0469	AZ24397S01 1/30.26G	soil	18 Nov 15 19:05
17	61	1117Y061.D	33.1016	AZ24398S02 1/30.21G	soil	18 Nov 15 19:34
18	62	1117Y062.D	32.5521	AZ24399S02 1/30.72G	soil	18 Nov 15 20:03
19	63	1117Y063.D	32.6158	AZ24400S02 1/30.66G	soil	18 Nov 15 20:31
20	64	1117Y064.D	32.4675	AZ24401S03 MS-1 1/30.80G	soil	18 Nov 15 21:00
21	65	1117Y065.D	32.3311	AZ24401S03 MSD-1 1/30.93G	soil	18 Nov 15 21:29
22	66	1117Y066.D	32.2997	AZ24401S03 1/30.96G	soil	18 Nov 15 21:58

EPA METHOD 8270D
Polynuclear Aromatic Hydrocarbons

APPL, INC.

EPA METHOD 8270D
Polynuclear Aromatic Hydrocarbons
QC Summary

Method Blank
EPA 8270D LL SOILS

Blank Name/QCG: 151117S-24401 - 202551
 Batch ID: #SIMDD-151117A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	11/17/2015	11/22/2015
BLANK	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	ANTHRACENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	11/17/2015	11/22/2015
BLANK	BENZ (A) ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	BENZO (A) PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	BENZO (B) FLUORANTHENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	11/17/2015	11/22/2015
BLANK	BENZO (G,H,I) PERYLENE	0.0017 U	0.005	0.0017	0.0013	mg/kg	11/17/2015	11/22/2015
BLANK	BENZO (K) FLUORANTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	11/17/2015	11/22/2015
BLANK	CHRYSENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	11/17/2015	11/22/2015
BLANK	DIBENZ (A,H) ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	FLUORANTHENE	0.0017 U	0.005	0.0017	0.0012	mg/kg	11/17/2015	11/22/2015
BLANK	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	11/17/2015	11/22/2015
BLANK	INDENO (1,2,3-CD) PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	NAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	PHENANTHRENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	11/17/2015	11/22/2015
BLANK	PYRENE	0.0017 U	0.005	0.0017	0.0012	mg/kg	11/17/2015	11/22/2015
BLANK	SURROGATE: 2-FLUORBIPHENY	53.8	45-105			%	11/17/2015	11/22/2015
BLANK	SURROGATE: NITROBENZENE-	67.2	35-100			%	11/17/2015	11/22/2015
BLANK	SURROGATE: TERPHENYL-D14 (	76.8	30-125			%	11/17/2015	11/22/2015

Quant Method: P1112.M
Run #: 1112L176
Instrument: Linus
Sequence: L151112
Initials: DA

GC SC-Blank-REG MDLs-DOD
 Printed: 11/25/2015 8:52:42 AM

8270D-LL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc.

SDG No: 77838

Case No: 77838

Date Analyzed: 11/22/2015

Matrix: SOIL

Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
151117A-BLK	Blank	45-105	53.8		35-100	67.2	
151117A-LCS	Lab Control Spike	45-105	65.9		35-100	74.9	
AZ24396	S67-SS50-0006	45-105	66.5		35-100	90.4	
AZ24397	S67-SS50-0006P	45-105	70.0		35-100	95.4	
AZ24398	S67-SB50-1618	45-105	74.4		35-100	96.2	
AZ24399	S67-SS51-0006	45-105	DO		35-100	DO	
AZ24400	S67-SS52-0006	45-105	67.3		35-100	93.0	
AZ24401-MS	Matrix Spike	45-105	75.4		35-100	95.4	
AZ24401	S67-SS53-0006	45-105	71.2		35-100	89.6	
AZ24401-MSD	Matrix SpikeD	45-105	87.2		35-100	101	*

Comments: Batch: #SIMDD-151117A

* = Recovery outside of Control Limits on QC Sample.

Printed: 11/28/2015 12:47:01 PM

Form 2 & 8, Surrogate Recovery Summary

8270D-LL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc.
 Case No: 77838
 Matrix: SOIL

SDG No: 77838
 Date Analyzed: 11/22/2015
 Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
151117A-BLK	Blank	30-125	76.8				
151117A-LCS	Lab Control Spike	30-125	84.5				
AZ24396	S67-SS50-0006	30-125	62.8				
AZ24397	S67-SS50-0006P	30-125	68.1				
AZ24398	S67-SB50-1618	30-125	83.9				
AZ24399	S67-SS51-0006	30-125	DO				
AZ24400	S67-SS52-0006	30-125	78.0				
AZ24401-MS	Matrix Spike	30-125	80.6				
AZ24401	S67-SS53-0006	30-125	80.1				
AZ24401-MSD	Matrix SpikeD	30-125	90.8				

Comments: Batch: #SIMDD-151117A

Printed: 11/28/2015 12:47:01 PM
 Form 2 & 8, Surrogate Recovery Summary

Laboratory Control Spike Recovery
EPA 8270D LL SOILS

APPL ID: **151117S-24401 LCS - 202551**

Batch ID: #SIMDD-151117A

APPL Inc.

908 North Temperance Avenue
 Clovis, CA 93611

Compound Name	Spike Level	SPK Result	SPK % Recovery	Recovery Limits
	mg/kg	mg/kg	Recovery	Limits
2-METHYLNAPHTHALENE	0.167	0.0984	58.9	45-105
ACENAPHTHENE	0.167	0.125	74.9	45-110
ACENAPHTHYLENE	0.167	0.120	71.9	45-105
ANTHRACENE	0.167	0.139	83.2	55-105
BENZ (A) ANTHRACENE	0.167	0.154	92.2	50-110
BENZO (A) PYRENE	0.167	0.149	89.2	50-110
BENZO (B) FLUORANTHENE	0.167	0.139	83.2	45-115
BENZO (G,H,I) PERYLENE	0.167	0.126	75.4	40-125
BENZO (K) FLUORANTHENE	0.167	0.150	89.8	45-125
CHRYSENE	0.167	0.146	87.4	55-110
DIBENZ (A,H) ANTHRACENE	0.167	0.133	79.6	40-125
FLUORANTHENE	0.167	0.150	89.8	55-115
FLUORENE	0.167	0.131	78.4	50-110
INDENO (1,2,3-CD) PYRENE	0.167	0.116	69.5	40-120
NAPHTHALENE	0.167	0.109	65.3	40-105
PHENANTHRENE	0.167	0.142	85.0	50-110
PYRENE	0.167	0.151	90.4	45-125
SURROGATE: 2-FLUORBIPHENYL (S)	0.083	0.0547	65.9	45-105
SURROGATE: NITROBENZENE-D5 (S)	0.083	0.0622	74.9	35-100
SURROGATE: TERPHENYL-D14 (S)	0.083	0.0701	84.5	30-125

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	P1112.M
Extraction Date :	11/17/2015
Analysis Date :	11/22/2015
Instrument :	Linus
Run :	1112L177
Initials :	DA

Printed: 11/25/2015 8:52:31 AM
 APPL Standard LCS

Matrix Spike Recoveries
EPA 8270D LL SOILS

APPL ID: **151117S-24401 MS - 202551**

Batch ID: #SIMDD-151117A

Sample ID: AZ24401

Client ID: S67-SS53-0006

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-METHYLNAPHTHALENE	0.133	ND	0.119	0.136	89.5	102	45-105	13.3	30
ACENAPHTHENE	0.167	ND	0.143	0.166	85.6	99.4	45-110	14.9	30
ACENAPHTHYLENE	0.167	ND	0.145	0.162	86.8	97.0	45-105	11.1	30
ANTHRACENE	0.167	ND	0.138	0.158	82.6	94.6	55-105	13.5	30
BENZ (A) ANTHRACENE	0.167	0.0024	0.161	0.177	95.0	105	50-110	9.5	30
BENZO (A) PYRENE	0.167	0.0022	0.141	0.167	83.1	98.7	50-110	16.9	30
BENZO (B) FLUORANTHENE	0.167	ND	0.134	0.171	80.2	102	45-115	24.3	30
BENZO (G,H,I) PERYLENE	0.167	0.0073	0.115	0.176	64.5	101	40-125	41.9 #	30
BENZO (K) FLUORANTHENE	0.167	ND	0.150	0.161	89.8	96.4	45-125	7.1	30
CHRYSENE	0.167	0.0023	0.134	0.161	78.9	95.0	55-110	18.3	30
DIBENZ (A,H) ANTHRACENE	0.167	0.0019	0.122	0.177	71.9	105	40-125	36.8 #	30
FLUORANTHENE	0.167	0.0032	0.153	0.178	89.7	105	55-115	15.1	30
FLUORENE	0.167	ND	0.148	0.170	88.6	102	50-110	13.8	30
INDENO (1,2,3-CD) PYRENE	0.167	0.0035	0.108	0.170	62.6	99.7	40-120	44.6 #	30
NAPHTHALENE	0.167	ND	0.128	0.146	76.6	87.4	40-105	13.1	30
PHENANTHRENE	0.167	0.0014	0.144	0.171	85.4	102	50-110	17.1	30
PYRENE	0.167	0.0028	0.151	0.170	88.7	100	45-125	11.8	30
SURROGATE: 2-FLUORBIPHENYL (S)	0.083	NA	0.0626	0.0724	75.4	87.2	45-105		
SURROGATE: NITROBENZENE-D5 (S)	0.083	NA	0.0792	0.084	95.4	101 #	35-100		
SURROGATE: TERPHENYL-D14 (S)	0.083	NA	0.0669	0.0754	80.6	90.8	30-125		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	P1112.M	P1112.M
Extraction Date :	11/17/2015	11/17/2015
Analysis Date :	11/23/2015	11/24/2015
Instrument :	Linus	Linus
Run :	1112L183	1112L197
Initials :		DA

Printed: 11/25/2015 8:52:26 AM

APPL MSD SCII

8270D-LL

Form 4

Blank Summary

Lab Name: APPL, Inc.
 Case No: 77838
 Matrix: SOIL
 Blank ID: 151117A-BLK

SDG No: 77838
 Date Analyzed: 11/22/2015
 Instrument: Linus
 Time Analyzed: 2110

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151117A-BLK	Blank	1112L176	11/22/2015 2110
151117A-LCS	Lab Control Spike	1112L177	11/22/2015 2137
AZ24396	S67-SS50-0006	1112L178	11/22/2015 2205
AZ24397	S67-SS50-0006P	1112L179	11/22/2015 2233
AZ24398	S67-SB50-1618	1112L180	11/22/2015 2301
AZ24399	S67-SS51-0006	1112L181	11/22/2015 2328
AZ24400	S67-SS52-0006	1112L182	11/22/2015 2356
151117A-MS	Matrix Spike	1112L183	11/23/2015 0023
AZ24401	S67-SS53-0006	1112L185	11/23/2015 0119
151117A-MSD	Matrix SpikeD	1112L197	11/24/2015 1331

Comments: Batch: #SIMDD-151117A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 1112L002.D → 77838
Matrix: Soil *112-7-15*
ID: SV Tune 08/14/15

SDG No: *112-7-15* Linus 77838
Date Analyzed: 11/12/2015
Instrument: Linus
Time Analyzed: 10:34

Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	0.1ug/ml PAH 11/12/1	1112L003.D	11/12/2015 11:05
2	0.2ug/ml PAH 11/12/1	1112L004.D	11/12/2015 11:32
3	0.5ug/ml PAH 11/12/1	1112L005.D	11/12/2015 12:00
4	1.0ug/ml PAH 11/12/1	1112L006.D	11/12/2015 12:28
5	5.0ug/ml PAH 11/12/1	1112L007.D	11/12/2015 12:56
6	10ug/ml PAH 11/12/15	1112L008.D	11/12/2015 13:24
7	50ug/ml PAH 11/12/15	1112L009.D	11/12/2015 13:51
8	100ug/ml PAH 11/12/1	1112L010.D	11/12/2015 14:19
9	5.0ug/ml PAH SS 11/1	1112L011.D	11/12/2015 15:20
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			

m/e		
51	30 - 60% of mass 198	47.4
68	0 - 2% of mass 69	1.5
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.5
127	40 - 60% of mass 198	51.1
197	0 - 1% of mass 198	0.4
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 30% of mass 198	22.4
365	1 - 100% of mass 198	3.2
441	0.01 - 100% of mass 443	78.9
442	40 - 150% of mass 198	101.3
443	17 - 23% of mass 442	18.8

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 77838
Matrix: Soil
ID: SV TUNE 11/16/15

SDG No: 77838
Date Analyzed: 11/22/2015
Instrument: Linus
Time Analyzed: 20:25

Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	CCV: 5.0ug/ml PAH 11	1112L175.D	11/22/2015 20:42
2	Blank	1112L176.D	11/22/2015 21:10
3	Lab Control Spike	1112L177.D	11/22/2015 21:37
4	S67-SS50-0006	1112L178.D	11/22/2015 22:05
5	S67-SS50-0006P	1112L179.D	11/22/2015 22:33
6	S67-SB50-1618	1112L180.D	11/22/2015 23:01
7	S67-SS51-0006	1112L181.D	11/22/2015 23:28
8	S67-SS52-0006	1112L182.D	11/22/2015 23:56
9	AZ24401S03 MS-1 1/30	1112L183.D	11/23/2015 0:23
10	S67-SS53-0006	1112L185.D	11/23/2015 1:19
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			

m/e

51	30 - 60% of mass 198	39.7
68	0 - 2% of mass 69	1.4
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	46.4
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 30% of mass 198	22.9
365	1 - 100% of mass 198	2.7
441	0.01 - 100% of mass 443	76.5
442	40 - 150% of mass 198	80.2
443	17 - 23% of mass 442	19.2

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 1112L195.D 77838
Matrix: Soil 1112-7-15
ID: SV TUNE 11/16/15

SDG No: Linus 77838
Date Analyzed: 11/24/2015
Instrument: Linus
Time Analyzed: 12:16

Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	CCV: 5.0ug/ml PAH 11	1112L196.D	11/24/2015 12:33
2	AZ24401S03 MSD-1 1/3	1112L197.D	11/24/2015 13:31
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			

m/e		
51	30 - 60% of mass 198	38.4
68	0 - 2% of mass 69	1.6
69	100 - 100% of mass 69	100.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	46.0
197	0 - 1% of mass 198	0.2
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 30% of mass 198	24.1
365	1 - 100% of mass 198	3.0
441	0.01 - 100% of mass 443	77.9
442	40 - 150% of mass 198	84.1
443	17 - 23% of mass 442	19.2

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc.

Contract: Review

Lab Code: _____

SDG No.: 77838

Lab File ID (Standard): 1112L008.D

Date Analyzed: 11/12/15

Instrument ID: Linus

Time Analyzed: 13:24

GC Column: _____

ID: _____ Heated Purge: (Y/N) _____

		Naphthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	20218	5.97	11269	8.01	18297	9.75
	UPPER LIMIT	40436	6.47	22538	8.51	36594	10.25
	LOWER LIMIT	10109	5.47	5635	7.51	9149	9.25
	SAMPLE						
	NO.						
01	5.0ug/ml PAH SS 11/12	15005	5.97	7467	8.01	12510	9.76
02	CCV: 5.0ug/ml PAH 11/	14744	5.97	6960	8.01	11145	9.75
03	151117A BLK 1/30.01G	20453	5.97	9751	8.01	15686	9.76
04	151117A LCS-1 1/30.05	21510	5.97	10667	8.01	16429	9.75
05	AZ24396S02 1/30.43G	20533	5.97	10384	8.01	16255	9.75
06	AZ24397S01 1/30.38G	21728	5.97	10998	8.01	17015	9.75
07	AZ24398S02 1/30.44G	19657	5.97	9712	8.01	15445	9.76
08	AZ24399S02 1/30.07G	19517	5.97	9946	8.01	15621	9.75
09	AZ24400S02 1/30.08G	19856	5.97	9828	8.01	15443	9.75
10	AZ24401S03 MS-1 1/30	19771	5.97	9607	8.01	15512	9.75
11	AZ24401S03 1/30.30G	19892	5.97	9466	8.01	14920	9.75
12	CCV: 5.0ug/ml PAH 11/	17400	5.96	8015	8.01	12909	9.75
13	AZ24401S03 MSD-1 1/3	19000	5.96	8890	8.01	14401	9.75
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = -50% of internal standard area.

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review
 Lab Code: SDG No.: 77838
 Lab File ID (Standard): 1112L008.D Date Analyzed: 11/12/15
 Instrument ID: Linus Time Analyzed: 13:24
 GC Column: ID: Heated Purge: (Y/N)

Chrysene-D12(IS)		Perylene-D12(IS)					
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12 HOUR STD	24868	12.90	14195	15.45			
UPPER LIMIT	49736	13.40	28390	15.95			
LOWER LIMIT	12434	12.40	7098	14.95			
SAMPLE							
NO.							
01 5.0ug/ml PAH SS 11/12	15715	12.92	8830	15.46			
02 CCV: 5.0ug/ml PAH 11/	14470	12.90	7462	15.45			
03 151117A BLK 1/30.01G	20700	12.90	10839	15.46			
04 151117A LCS-1 1/30.05	21309	12.90	10849	15.44			
05 AZ24396S02 1/30.43G	20600	12.90	10348	15.45			
06 AZ24397S01 1/30.38G	21542	12.90	11243	15.45			
07 AZ24398S02 1/30.44G	20674	12.90	10284	15.46			
08 AZ24399S02 1/30.07G	20257	12.90	10189	15.45			
09 AZ24400S02 1/30.08G	19860	12.90	10479	15.45			
10 AZ24401S03 MS-1 1/30	19939	12.90	10320	15.45			
11 AZ24401S03 1/30.30G	19601	12.90	9806	15.46			
12 CCV: 5.0ug/ml PAH 11/	16980	12.90	9764	15.45			
13 AZ24401S03 MSD-1 1/3	19179	12.90	10774	15.45			
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = -50% of internal standard area.

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

EPA METHOD 8270D
Polynuclear Aromatic Hydrocarbons
Sample Data

EPA 8270D LL SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24396
QCG: #SIMDD-151117A-202551

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 15.9 Percent Moisture.)							
8270D-LL	2-METHYLNAPHTHALENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHENE	0.006 U	0.006	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHYLENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	ANTHRACENE	0.006 U	0.006	0.0010	mg/kg	11/17/15	11/22/15
8270D-LL	BENZ (A) ANTHRACENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (A) PYRENE	0.0066	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (B) FLUORANTHENE	0.0017 J	0.006	0.0013	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (G,H,I) PERYLENE	0.016	0.006	0.0015	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (K) FLUORANTHENE	0.006 U	0.006	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	CHRYSENE	0.0054 J	0.006	0.0010	mg/kg	11/17/15	11/22/15
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.0050 J	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORANTHENE	0.006 U	0.006	0.0014	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORENE	0.006 U	0.006	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.0080	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	NAPHTHALENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	PHENANTHRENE	0.0024 J	0.006	0.0013	mg/kg	11/17/15	11/22/15
8270D-LL	PYRENE	0.0072	0.006	0.0014	mg/kg	11/17/15	11/22/15
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	66.5	45-105		%	11/17/15	11/22/15
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	90.4	35-100		%	11/17/15	11/22/15
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	62.8	30-125		%	11/17/15	11/22/15

J = Estimated value.

Quant Method: P1112.M
Run #: 1112L178
Instrument: Linus
Sequence: L151112
Dilution Factor: 1
Initials: DA

Printed: 11/28/2015 12:27:01 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L178.D Vial: 78
 Acq On : 22 Nov 15 22:05 Operator: MA
 Sample : AZ24396S02 1/30.43G Inst : Linus
 Misc : soil Multiplr: 32.86

Quant Time: Nov 28 12:14 2015

Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Napthalene-D8(IS)	5.97	136	20533	2.50	ppb	0.00
6) Acenaphthene-D10(IS)	8.01	164	10384	2.50	ppb	0.00
11) Phenanthrene-D10(IS)	9.75	188	16255	2.50	ppb	0.00
15) Chrysene-D12(IS)	12.90	240	20600	2.50	ppb	0.00
21) Perylene-D12(IS)	15.45	264	10348	2.50	ppb	0.00

System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.15	82	3613	74.30	ppb	0.02
Spiked Amount	82.156		Recovery	=	90.433%	
7) Surrogate Recovery (FBP)	7.23	172	8916	54.65	ppb	0.00
Spiked Amount	82.156		Recovery	=	66.518%	
17) Surrogate Recovery (TPH)	11.61	244	10115	51.57	ppb	-0.01
Spiked Amount	82.156		Recovery	=	62.771%	

Target Compounds					Qvalue
12) Phenanthrene	9.79	178	514	2.05	ppb 95
16) Pyrene	11.43	202	2215	6.10	ppb 91
19) Chrysene	12.94	228	1456	4.53	ppb 96
20) Indeno (1,2,3-cd) pyrene	17.67	276	2172	6.70	ppb # 93
22) Benzo (b) fluoranthene	14.67	252	1705	1.43	ppb # 91
24) Benzo (a) pyrene	15.21	252	1255	5.57	ppb # 92
25) Dibenz (a,h) anthracene	17.70	278	911	4.17	ppb 95
26) Benzo (g,h,i) perylene	18.19	276	3159	13.53	ppb 96

Quantitation Report

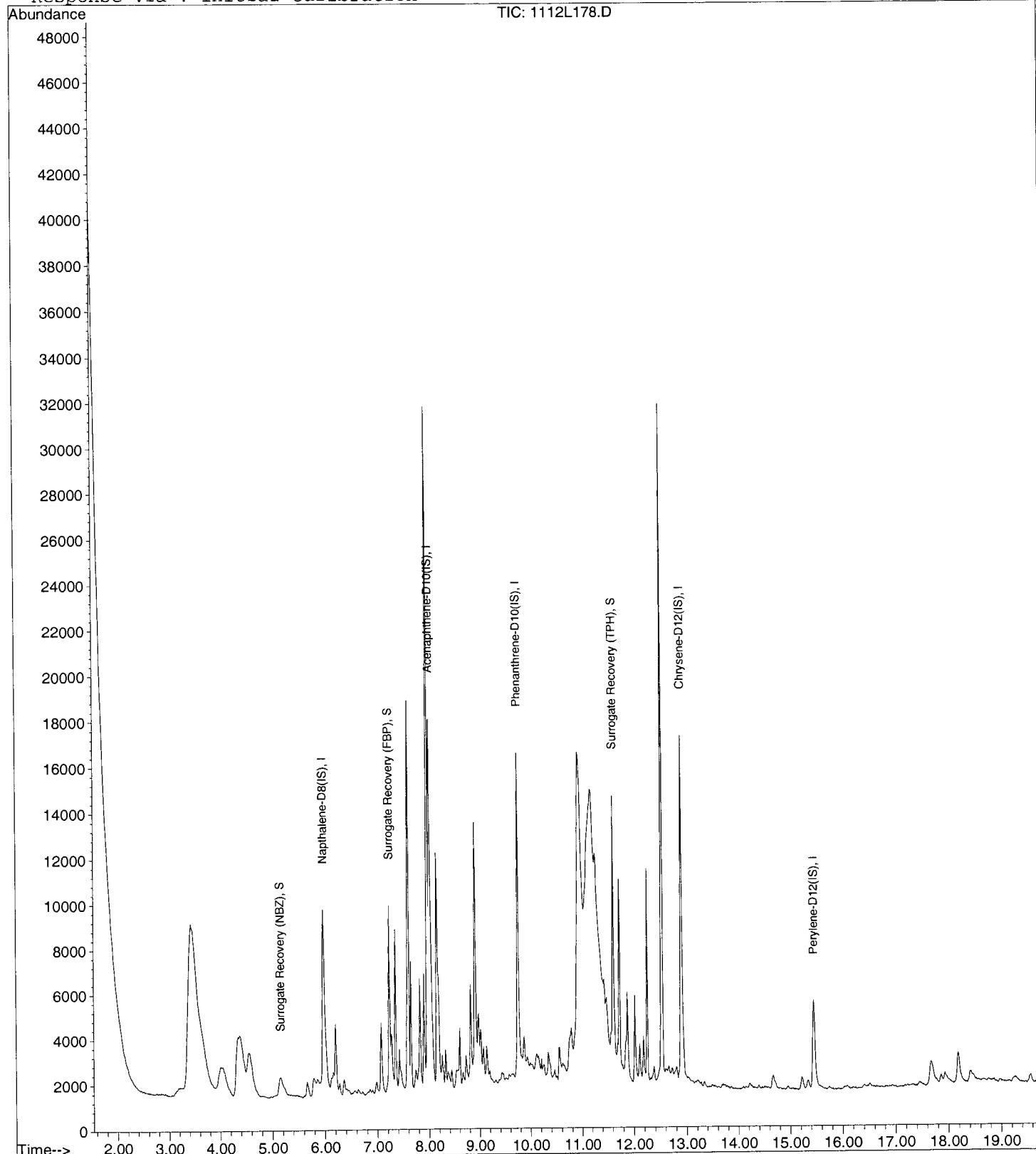
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 Acq On : 22 Nov 15 22:05
 Sample : AZ24396S02 1/30.43G
 Misc : soil

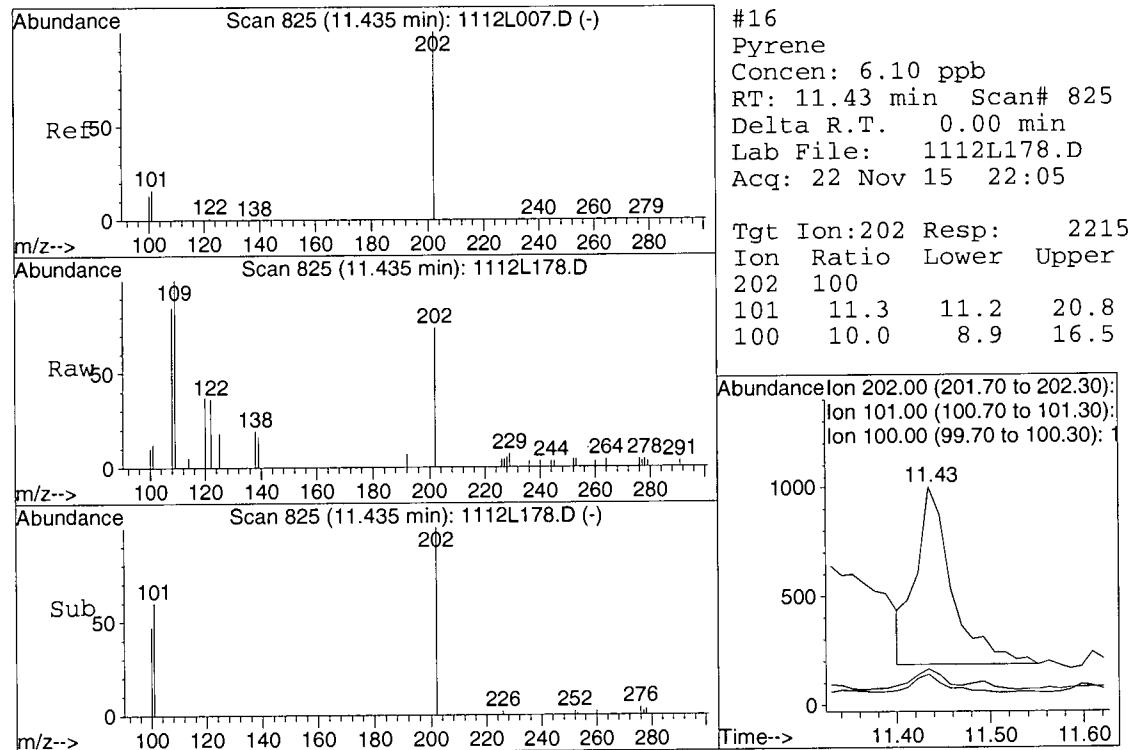
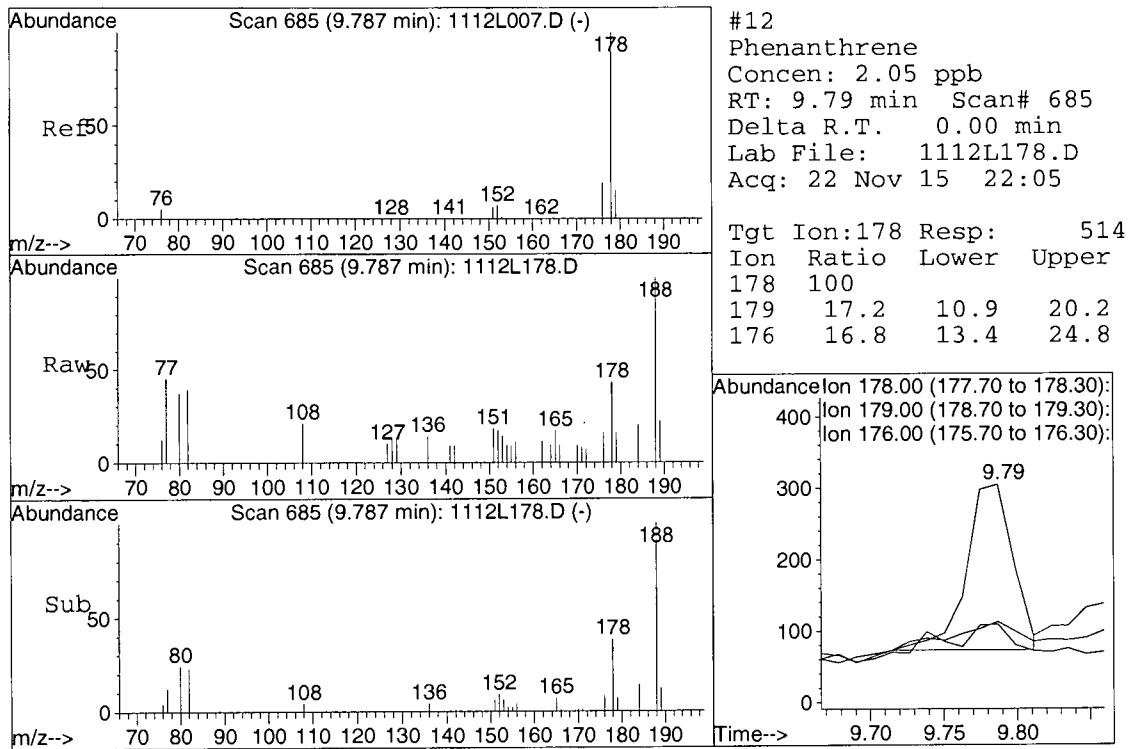
Vial: 78
 Operator: MA
 Inst : Linus
 Multiplr: 32.86

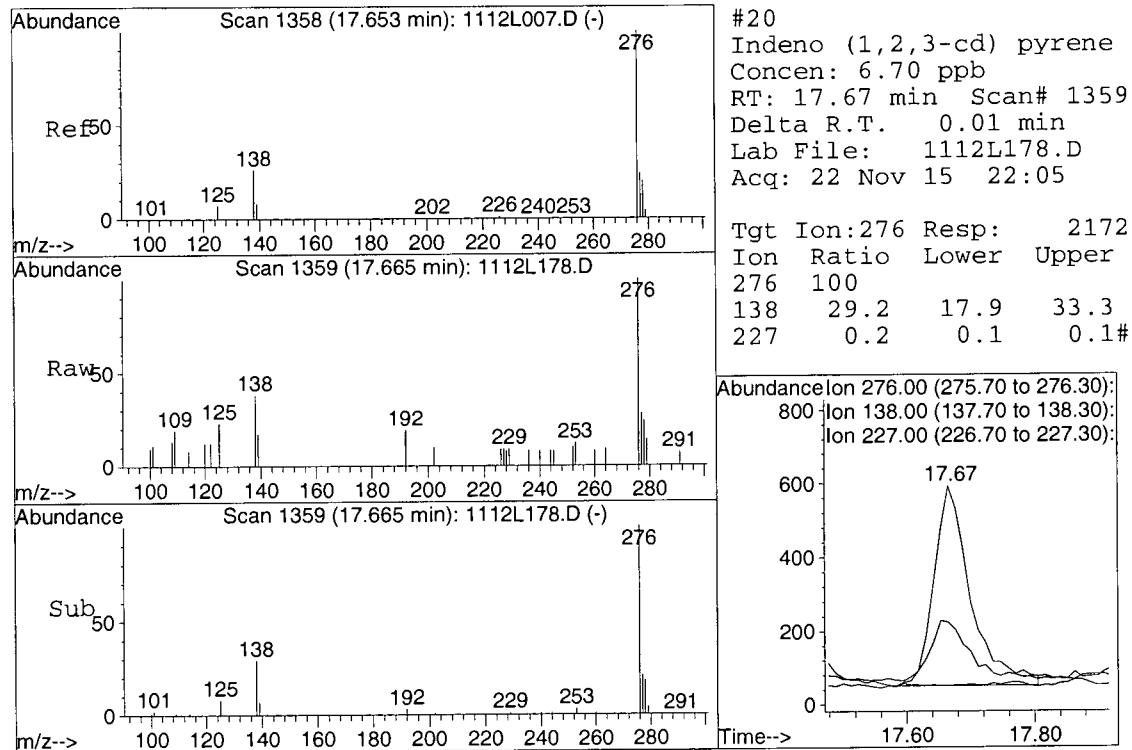
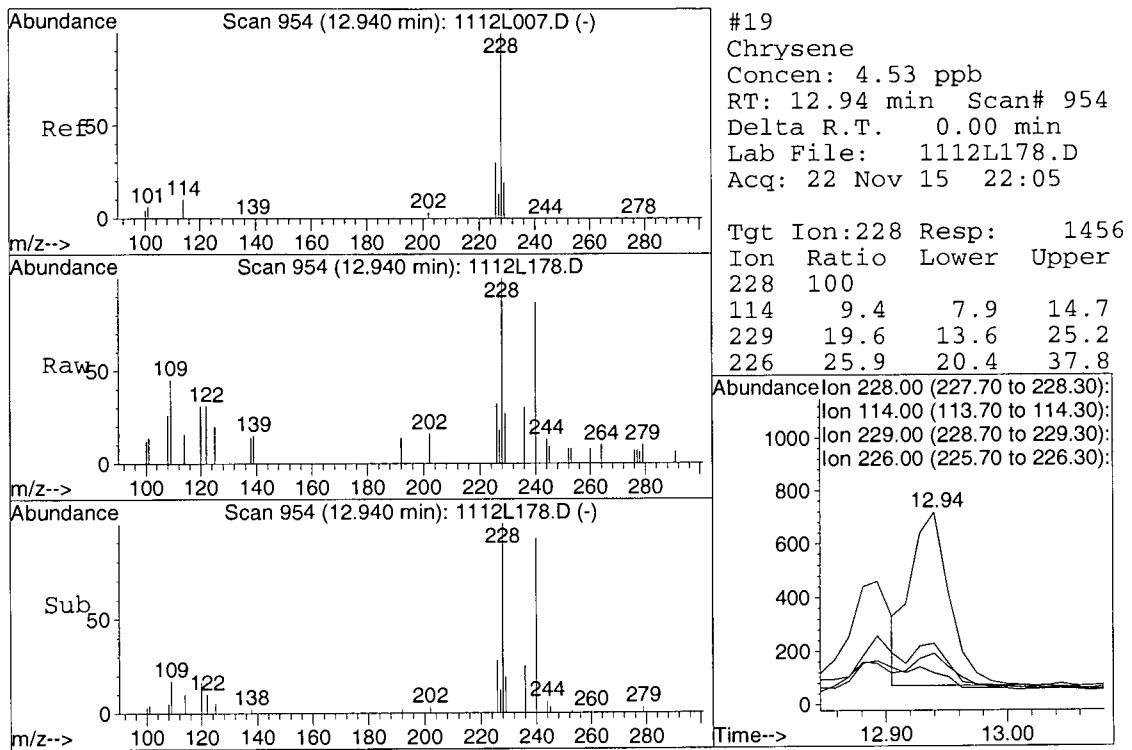
Quant Time: Nov 28 12:14 2015

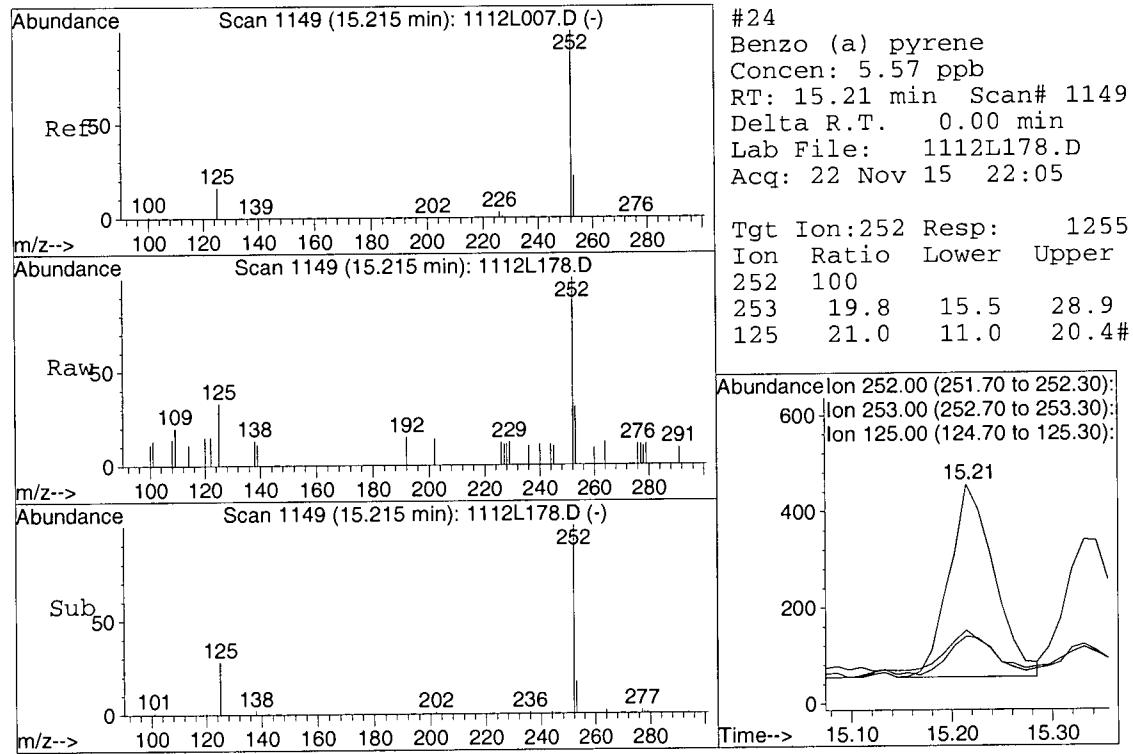
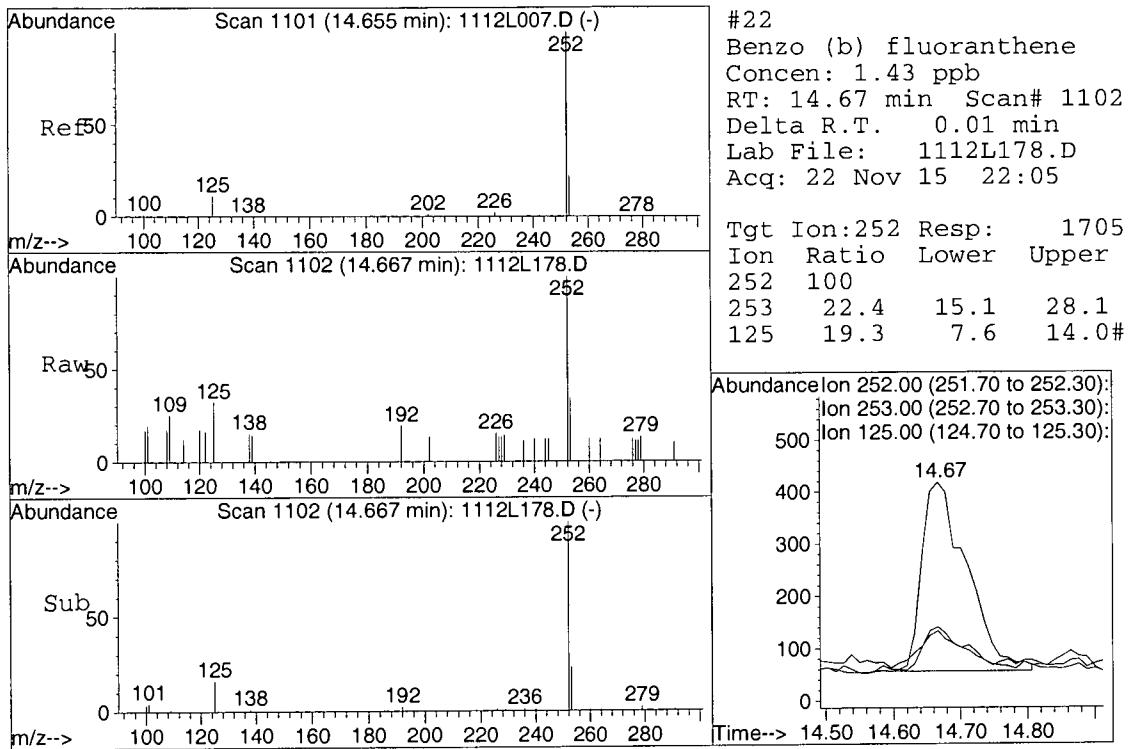
Quant Results File: P1112.RES

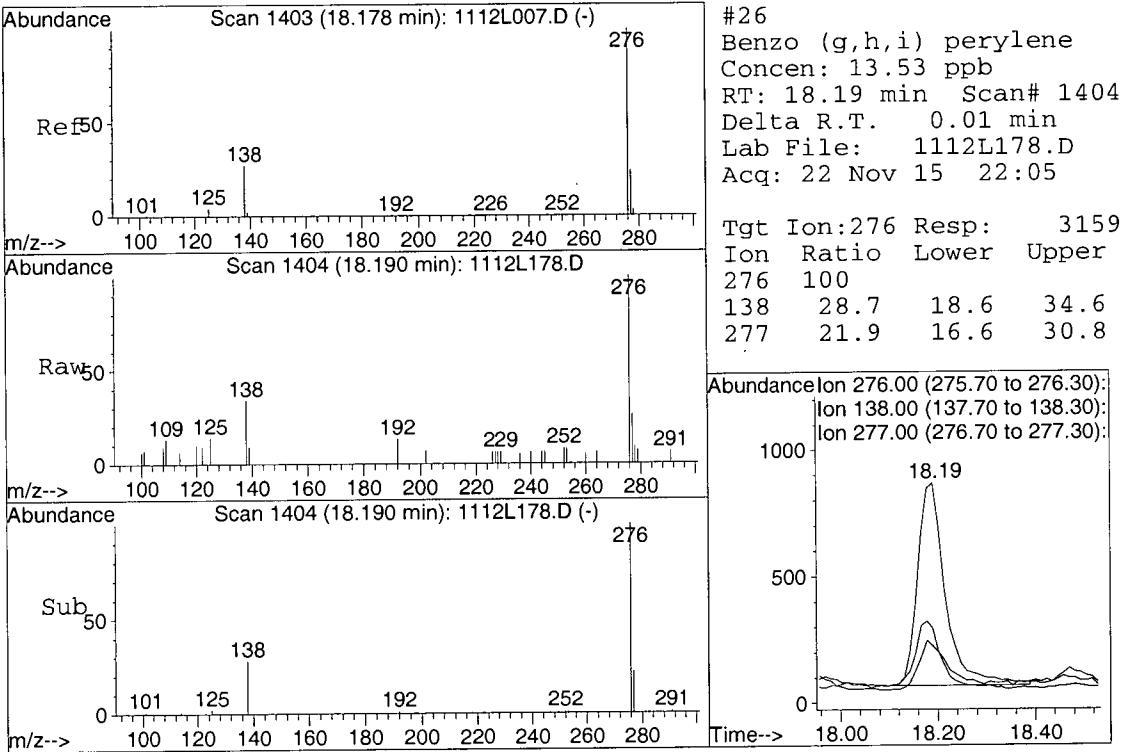
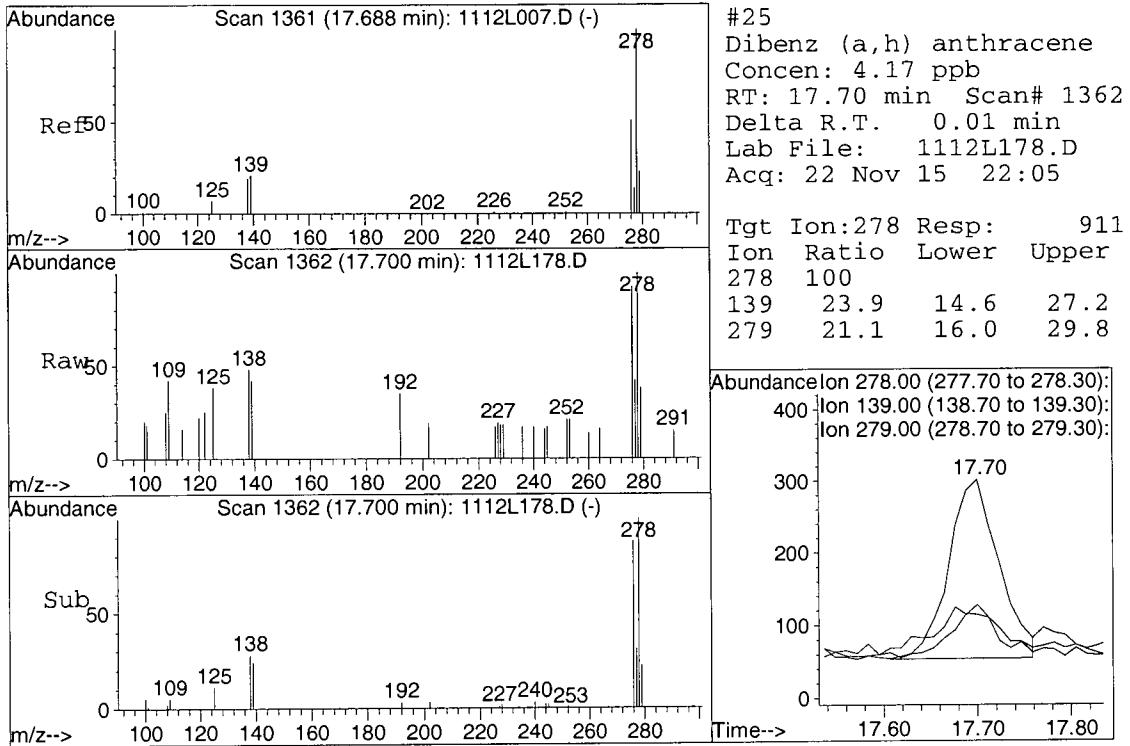
Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Wed Nov 25 09:14:03 2015
 Response via : Initial Calibration











EPA 8270D LL SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006P
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24397
QCG: #SIMDD-151117A-202551

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 15.3 Percent Moisture.)							
8270D-LL	2-METHYLNAPHTHALENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHENE	0.006 U	0.006	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHYLENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	ANTHRACENE	0.006 U	0.006	0.0009	mg/kg	11/17/15	11/22/15
8270D-LL	BENZ (A) ANTHRACENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (A) PYRENE	0.0028 J	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (B) FLUORANTHENE	0.006 U	0.006	0.0013	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (G,H,I) PERYLENE	0.0098	0.006	0.0015	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (K) FLUORANTHENE	0.006 U	0.006	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	CHRYSENE	0.0036 J	0.006	0.0009	mg/kg	11/17/15	11/22/15
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.0023 J	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORANTHENE	0.006 U	0.006	0.0014	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORENE	0.006 U	0.006	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.0052 J	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	NAPHTHALENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	PHENANTHRENE	0.0038 J	0.006	0.0013	mg/kg	11/17/15	11/22/15
8270D-LL	PYRENE	0.014	0.006	0.0014	mg/kg	11/17/15	11/22/15
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	70.0	45-105		%	11/17/15	11/22/15
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	95.4	35-100		%	11/17/15	11/22/15
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	68.1	30-125		%	11/17/15	11/22/15

J = Estimated value.

Quant Method: P1112.M
Run #: 1112L179
Instrument: Linus
Sequence: L151112
Dilution Factor: 1
Initials: DA

Printed: 11/28/2015 12:27:01 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L179.D Vial: 79
 Acq On : 22 Nov 15 22:33 Operator: MA
 Sample : AZ24397S01 1/30.38G Inst : Linus
 Misc : soil Multiplr: 32.92

Quant Time: Nov 28 12:15 2015

Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-D8 (IS)	5.97	136	21728	2.50	ppb	0.00
6) Acenaphthene-D10 (IS)	8.01	164	10998	2.50	ppb	0.00
11) Phenanthrene-D10 (IS)	9.75	188	17015	2.50	ppb	0.00
15) Chrysene-D12 (IS)	12.90	240	21542	2.50	ppb	0.00
21) Perylene-D12 (IS)	15.45	264	11243	2.50	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) Surrogate Recovery (NBZ)	5.14	82	4225	78.49	ppb	0.01
Spiked Amount	82.291		Recovery	=	95.377%	
7) Surrogate Recovery (FBP)	7.23	172	9943	57.63	ppb	0.00
Spiked Amount	82.291		Recovery	=	70.038%	
17) Surrogate Recovery (TPH)	11.61	244	11479	56.06	ppb	-0.01
Spiked Amount	82.291		Recovery	=	68.120%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
12) Phenanthrene	9.77	178	835	3.19	ppb	96
16) Pyrene	11.45	202	4545	11.98	ppb	# 82
19) Chrysene	12.94	228	1033	3.08	ppb	94
20) Indeno (1,2,3-cd) pyrene	17.67	276	1490	4.40	ppb	# 100
24) Benzo (a) pyrene	15.21	252	572	2.34	ppb	92
25) Dibenz (a,h) anthracene	17.70	278	452	1.91	ppb	95
26) Benzo (g,h,i) perylene	18.19	276	2109	8.33	ppb	97

Quantitation Report

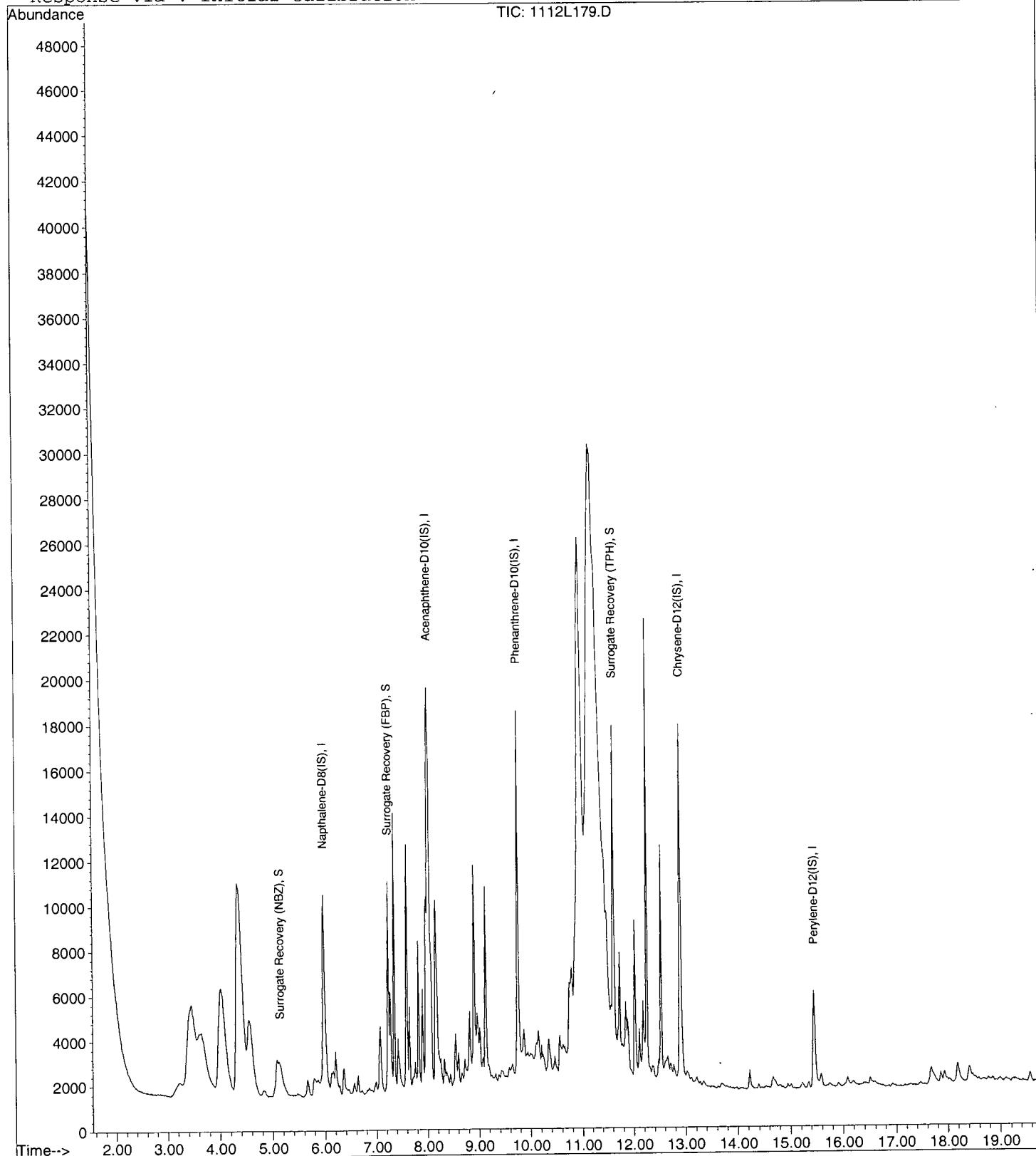
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 Acq On : 22 Nov 15 22:33
 Sample : AZ24397S01 1/30.38G
 Misc : soil

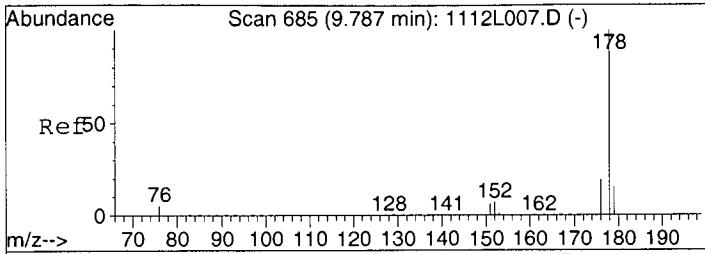
Vial: 79
 Operator: MA
 Inst : Linus
 Multiplr: 32.92

Quant Time: Nov 28 12:15 2015

Quant Results File: P1112.RES

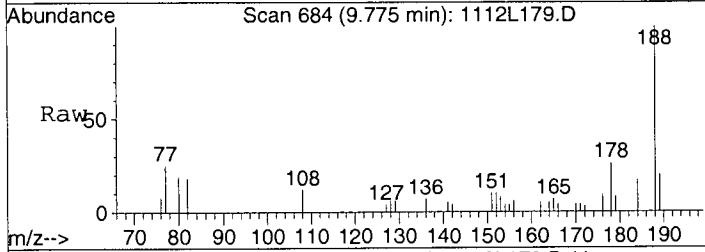
Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Wed Nov 25 09:14:03 2015
 Response via : Initial Calibration



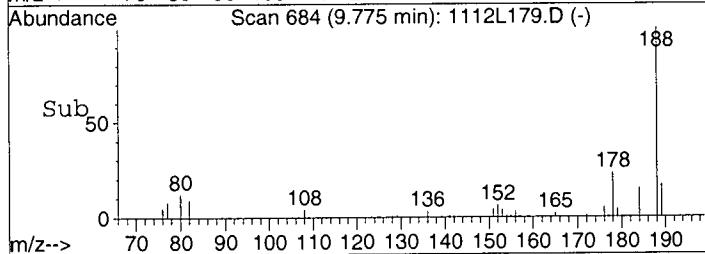


#12
Phenanthrene
Concen: 3.19 ppb
RT: 9.77 min Scan# 684
Delta R.T. -0.01 min
Lab File: 1112L179.D
Acq: 22 Nov 15 22:33

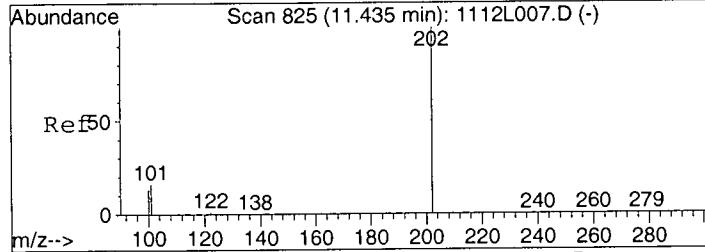
Tgt Ion:178 Resp: 835
Ion Ratio Lower Upper
178 100
179 16.7 10.9 20.2
176 21.4 13.4 24.8



Abundance_{ion 178.00 (177.70 to 178.30):}
_{ion 179.00 (178.70 to 179.30):}
_{ion 176.00 (175.70 to 176.30):}

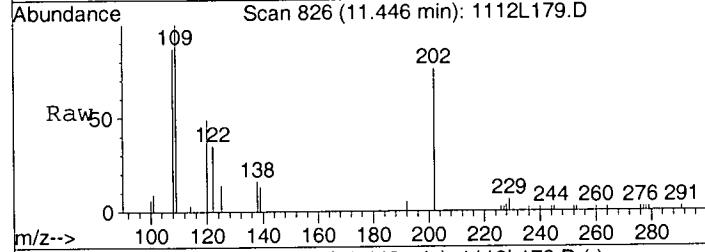


Time--> 9.70 9.75 9.80 9.85

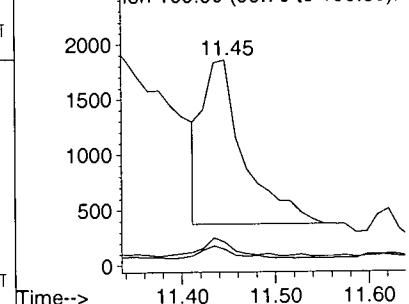
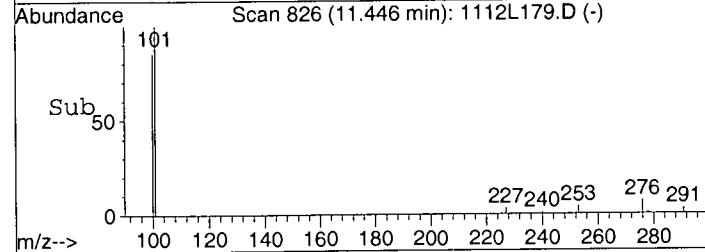


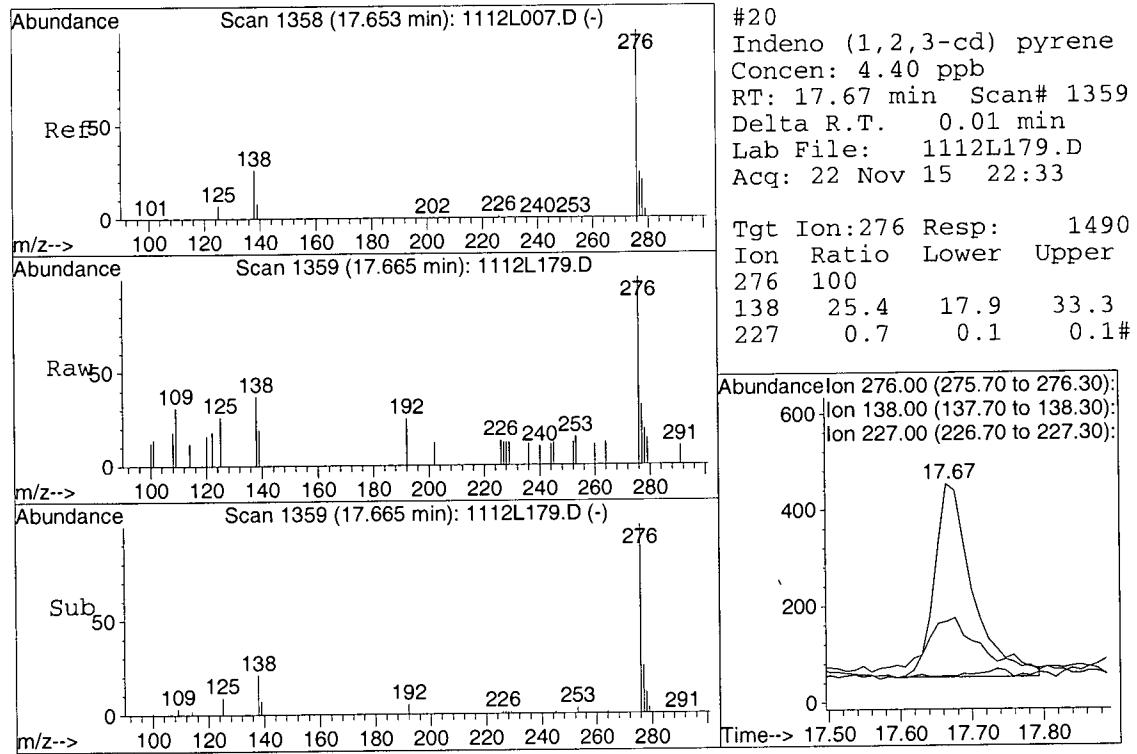
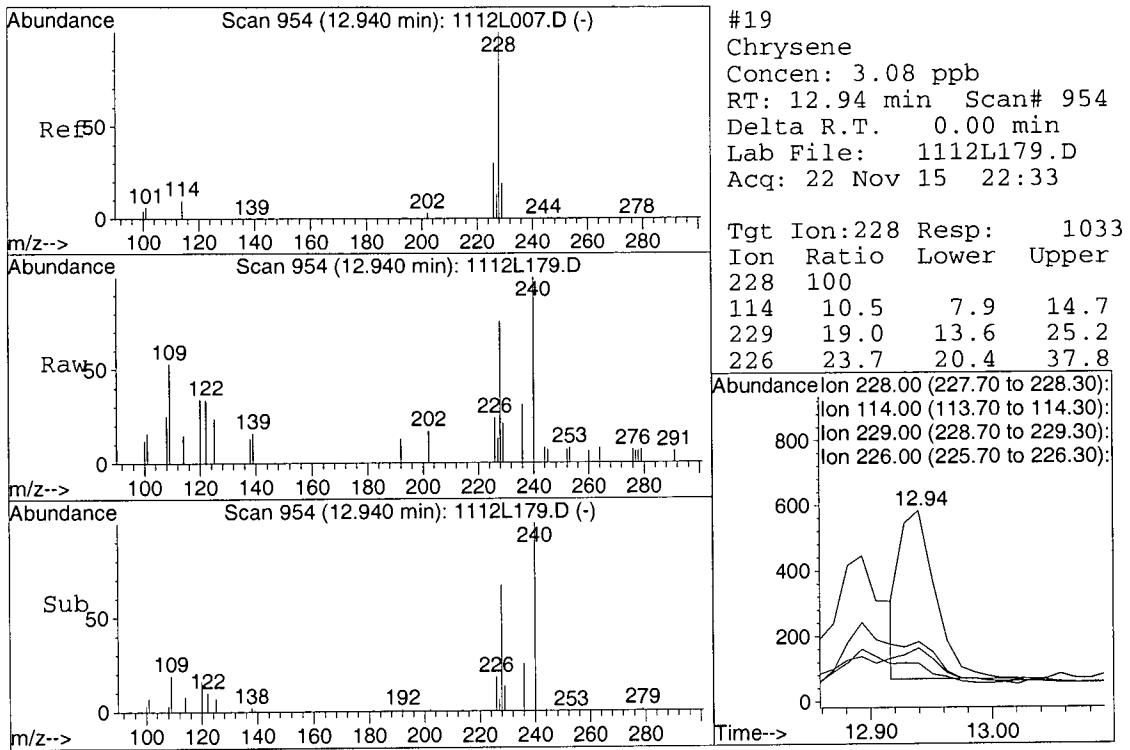
#16
Pyrene
Concen: 11.98 ppb
RT: 11.45 min Scan# 826
Delta R.T. 0.01 min
Lab File: 1112L179.D
Acq: 22 Nov 15 22:33

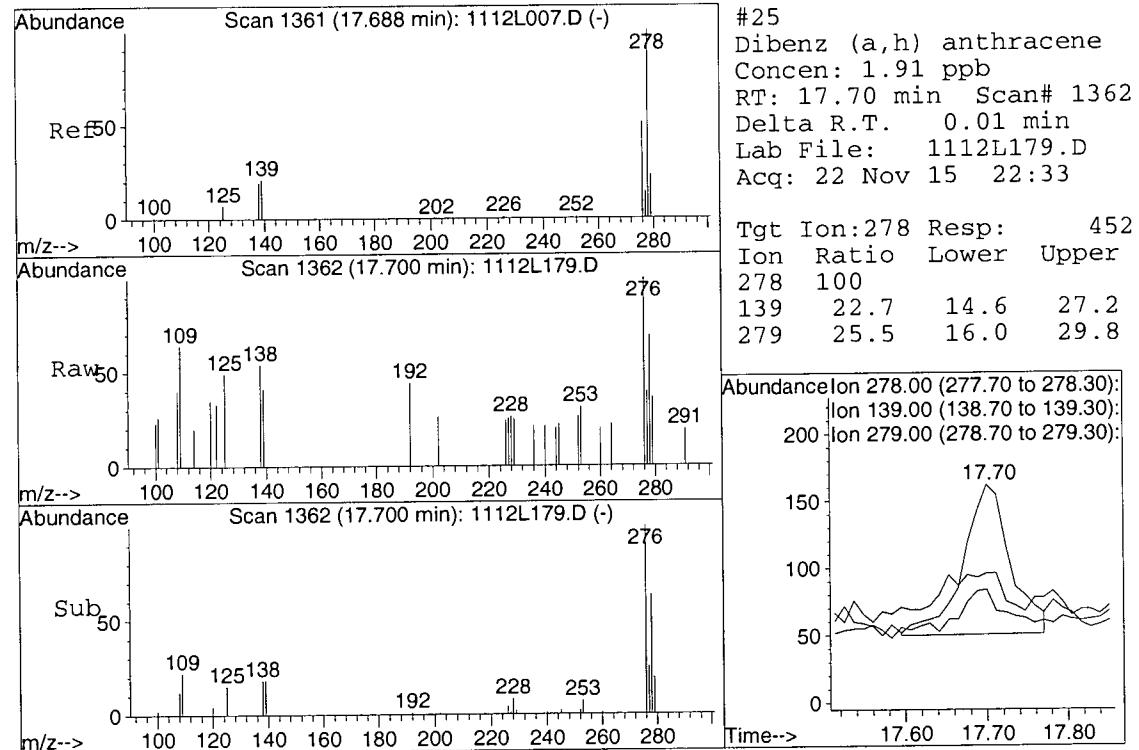
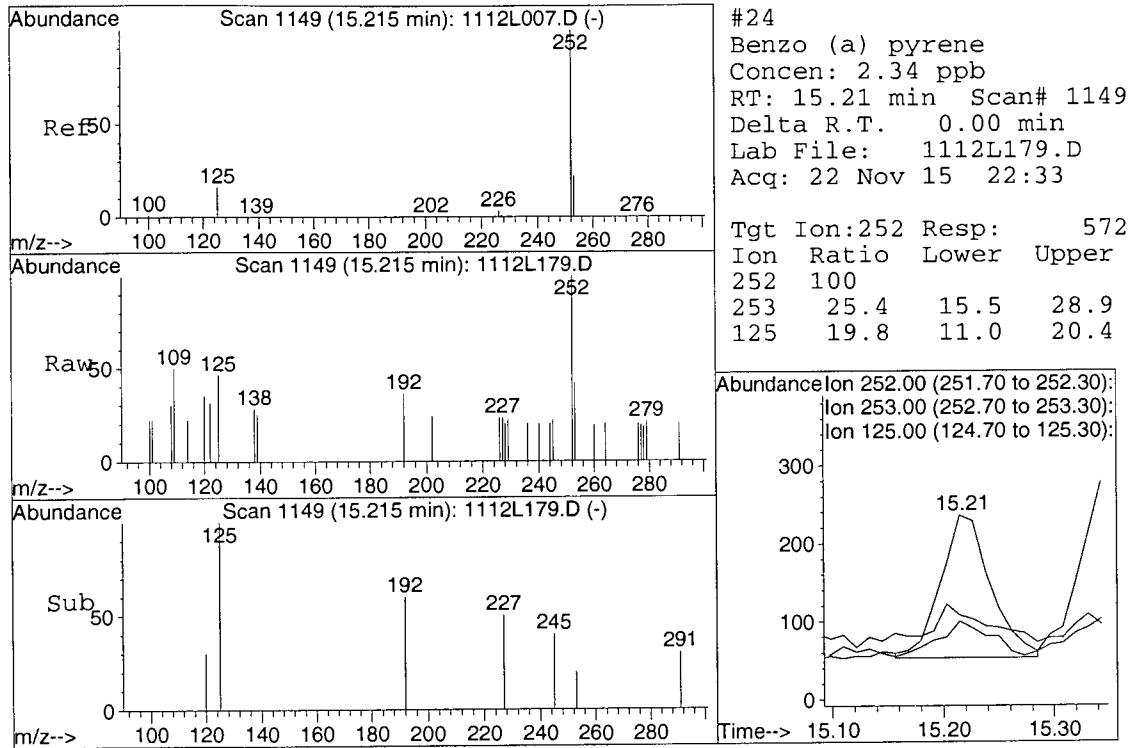
Tgt Ion:202 Resp: 4545
Ion Ratio Lower Upper
202 100
101 8.6 11.2 20.8#
100 5.4 8.9 16.5#

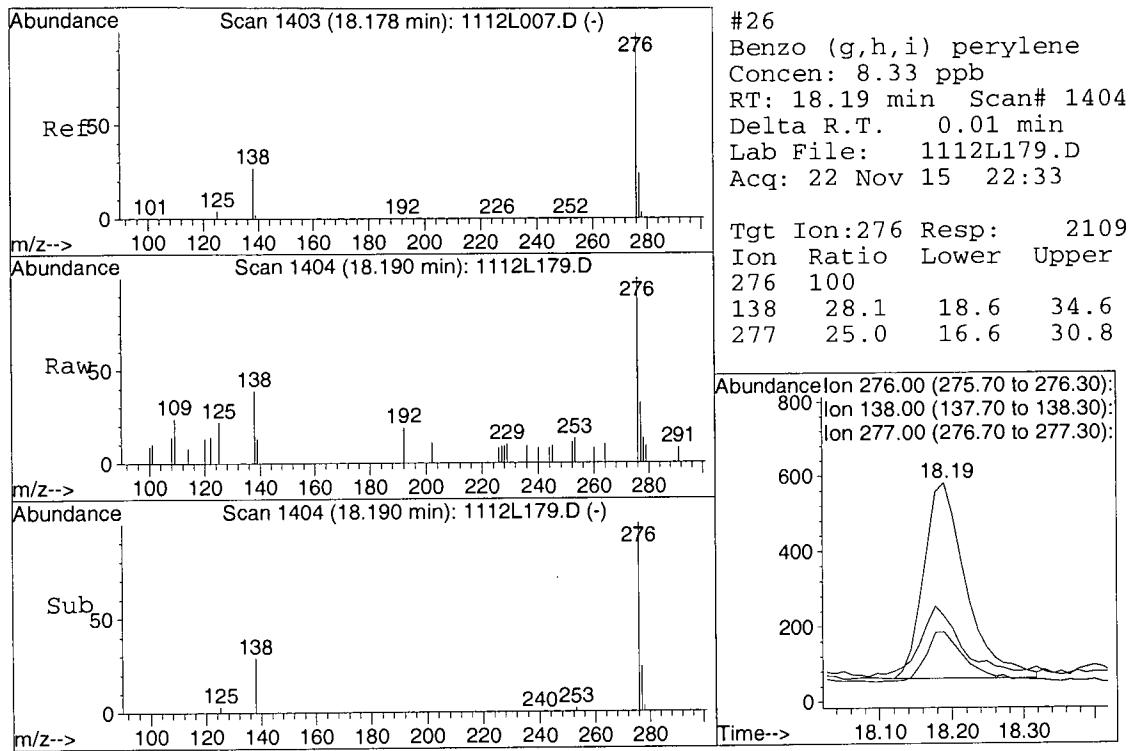


Abundance_{ion 202.00 (201.70 to 202.30):}
_{ion 101.00 (100.70 to 101.30):}
_{ion 100.00 (99.70 to 100.30):}









EPA 8270D LL SOILS

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SB50-1618
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24398
QCG: #SIMDD-151117A-202551

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 21.2 Percent Moisture.)							
8270D-LL	2-METHYLNAPHTHALENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHENE	0.006 U	0.006	0.0013	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHYLENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	ANTHRACENE	0.006 U	0.006	0.0010	mg/kg	11/17/15	11/22/15
8270D-LL	BENZ (A) ANTHRACENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (A) PYRENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (B) FLUORANTHENE	0.006 U	0.006	0.0014	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (G,H,I) PERYLENE	0.010	0.006	0.0016	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (K) FLUORANTHENE	0.006 U	0.006	0.0013	mg/kg	11/17/15	11/22/15
8270D-LL	CHRYSENE	0.0046 J	0.006	0.0010	mg/kg	11/17/15	11/22/15
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORANTHENE	0.006 U	0.006	0.0015	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORENE	0.006 U	0.006	0.0013	mg/kg	11/17/15	11/22/15
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.0050 J	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	NAPHTHALENE	0.006 U	0.006	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	PHENANTHRENE	0.006 U	0.006	0.0014	mg/kg	11/17/15	11/22/15
8270D-LL	PYRENE	0.006 U	0.006	0.0015	mg/kg	11/17/15	11/22/15
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	74.4	45-105		%	11/17/15	11/22/15
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	96.2	35-100		%	11/17/15	11/22/15
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	83.9	30-125		%	11/17/15	11/22/15

J = Estimated value.

Quant Method: P1112.M
Run #: 1112L180
Instrument: Linus
Sequence: L151112
Dilution Factor: 1
Initials: DA

Printed: 11/28/2015 12:27:01 PM
APPL-F1-SC-MCRes/MCPQL-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L180.D Vial: 80
 Acq On : 22 Nov 15 23:01 Operator: MA
 Sample : AZ24398S02 1/30.44G Inst : Linus
 Misc : soil Multiplr: 32.85

Quant Time: Nov 28 12:17 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Napthalene-D8(IS)	5.97	136	19657	2.50	ppb	0.00
6) Acenaphthene-D10(IS)	8.01	164	9712	2.50	ppb	0.00
11) Phenanthrene-D10(IS)	9.76	188	15445	2.50	ppb	0.01
15) Chrysene-D12(IS)	12.90	240	20674	2.50	ppb	0.00
21) Perylene-D12(IS)	15.46	264	10284	2.50	ppb	0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.15	82	3882	79.00	ppb	0.02
Spiked Amount	82.129		Recovery	=	96.190%	
7) Surrogate Recovery (FBP)	7.24	172	9324	61.08	ppb	0.01
Spiked Amount	82.129		Recovery	=	74.375%	
17) Surrogate Recovery (TPH)	11.61	244	13573	68.93	ppb	-0.01
Spiked Amount	82.129		Recovery	=	83.928%	
Target Compounds						
19) Chrysene	12.95	228	1182	3.66	ppb	98
20) Indeno (1,2,3-cd) pyrene	17.68	276	1291	3.96	ppb	# 99
26) Benzo (g,h,i) perylene	18.19	276	1906	8.21	ppb	96

Quantitation Report

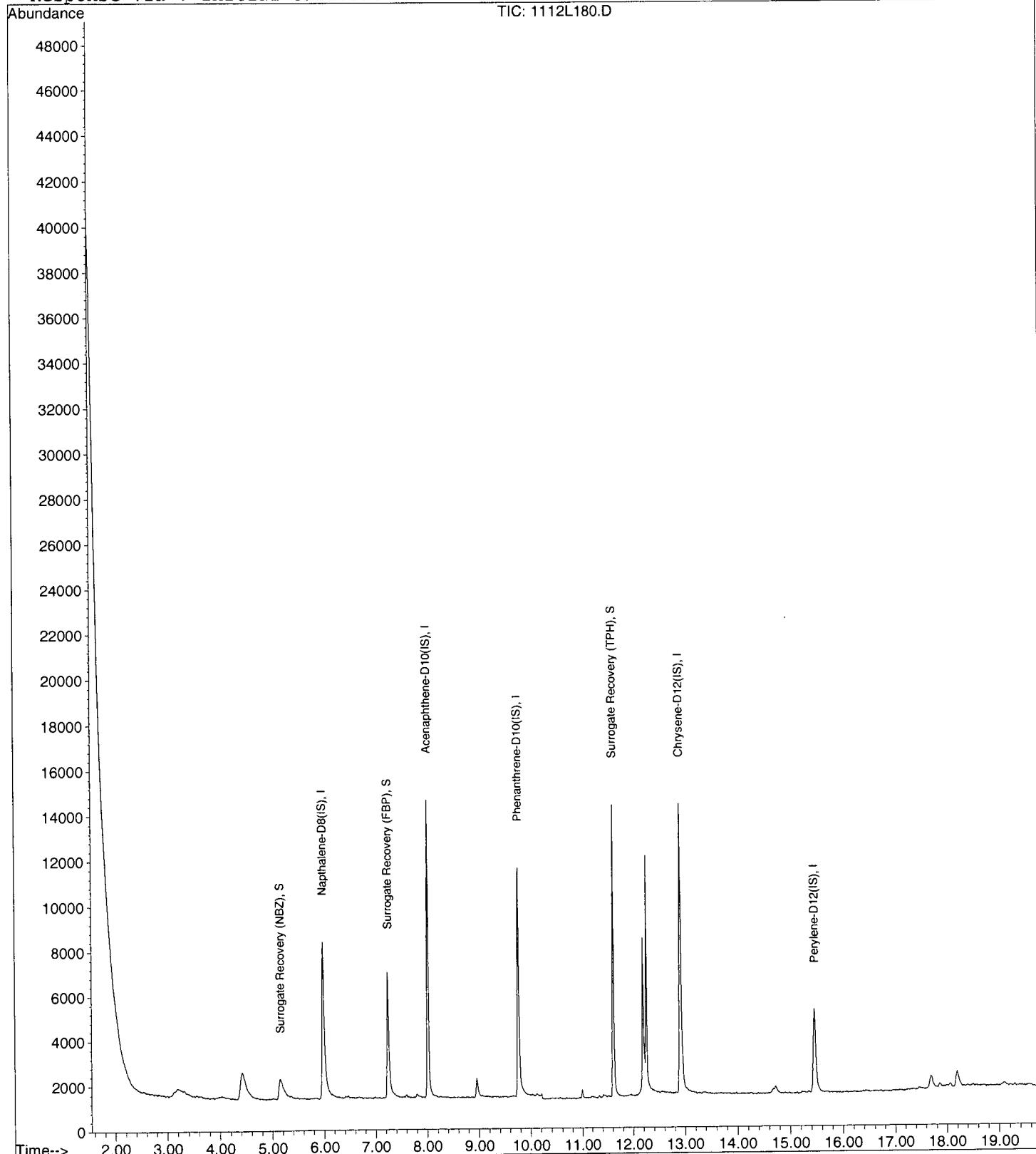
Data File : M:\LINUS\DATA\L151112\1112L180.D
Acq On : 22 Nov 15 23:01
Sample : AZ24398S02 1/30.44G
Misc : soil

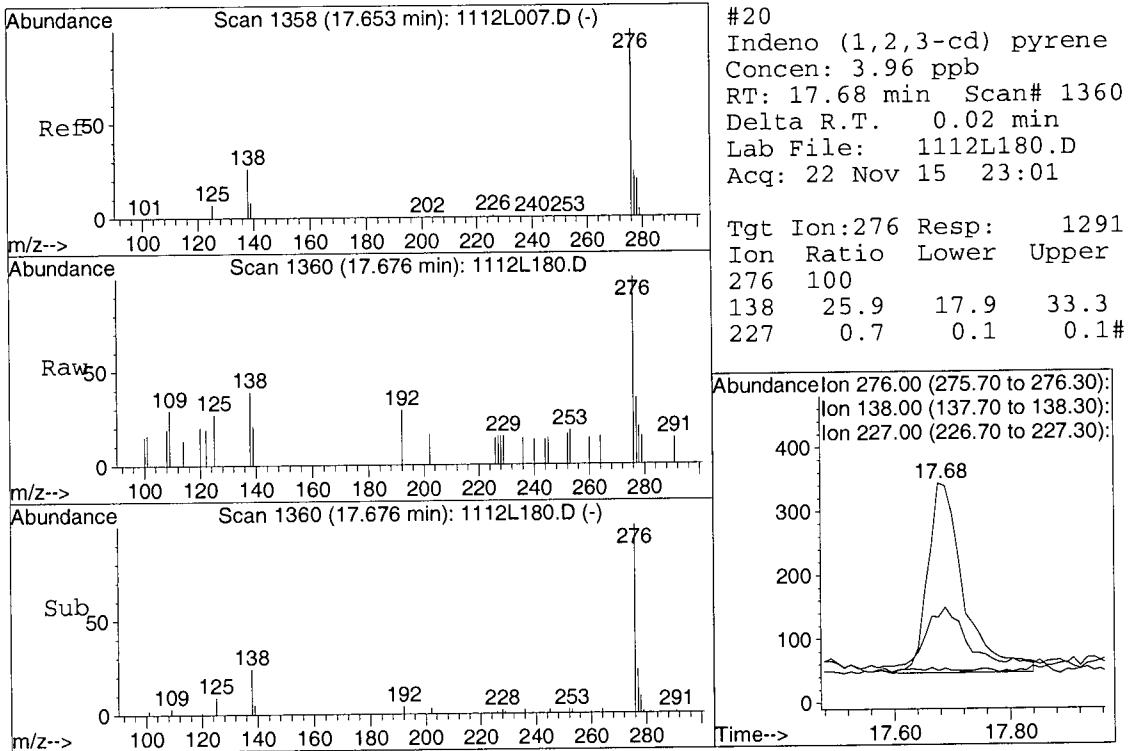
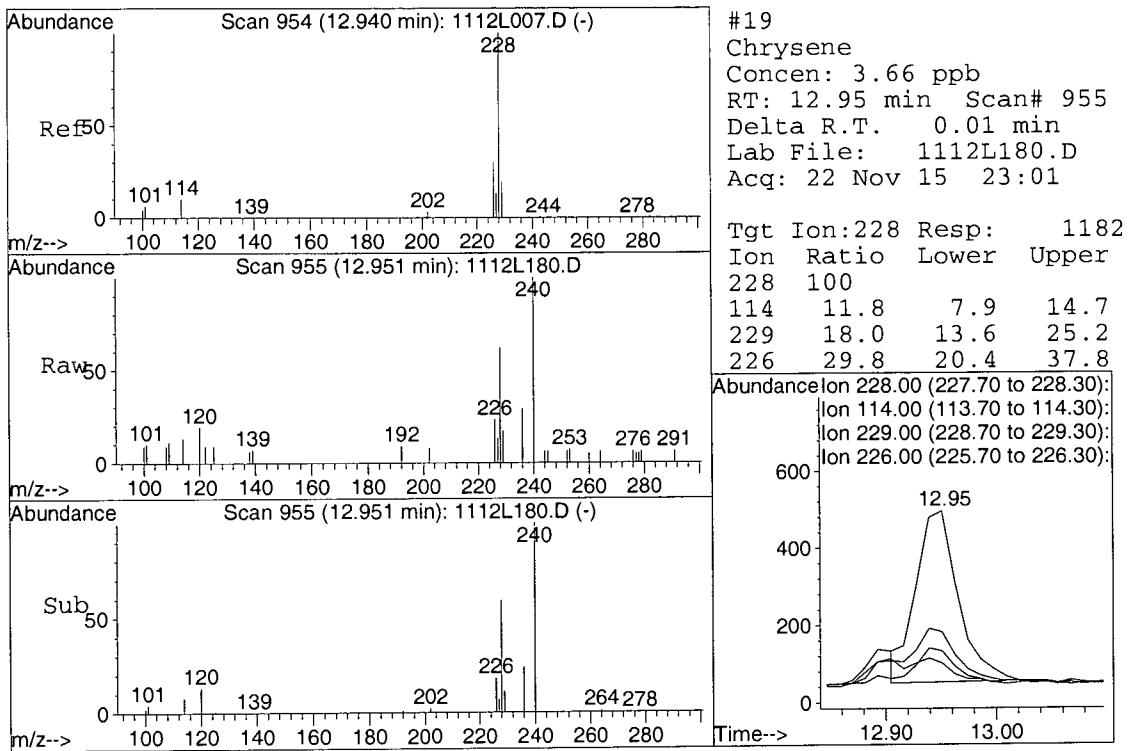
Vial: 80
Operator: MA
Inst : Linus
Multiplr: 32:85

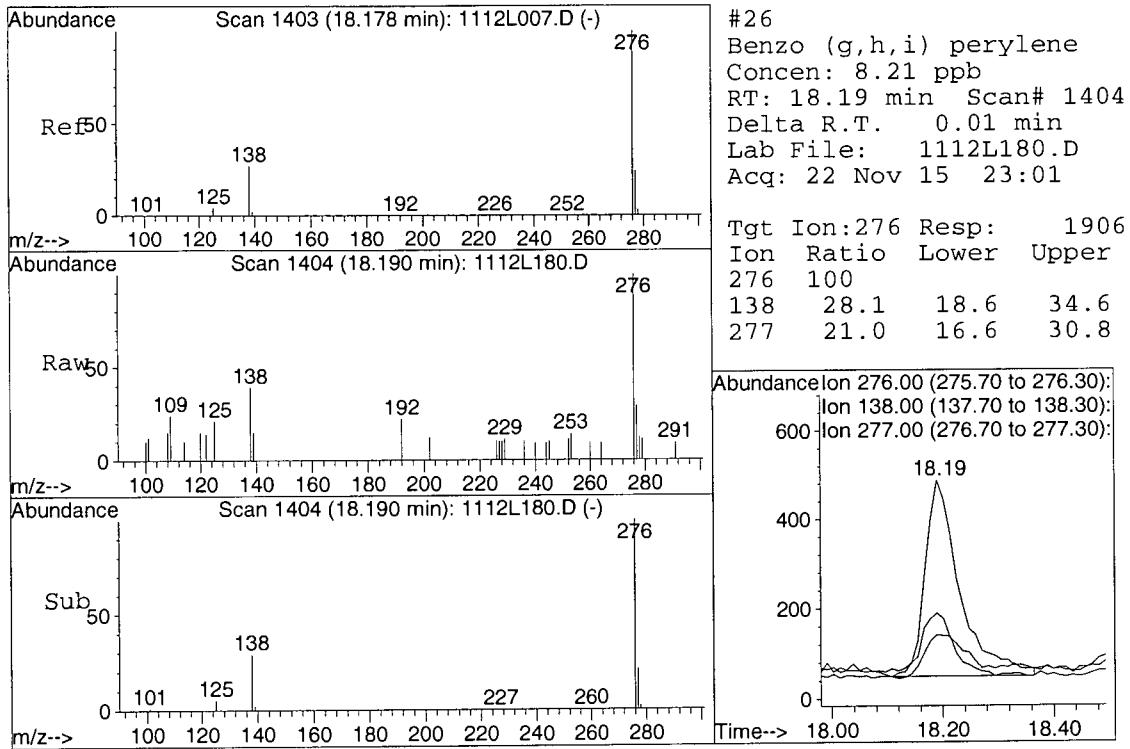
Quant Time: Nov 28 12:17 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
Title : EPA 8270
Last Update : Wed Nov 25 09:14:03 2015
Response via : Initial Calibration







EPA 8270D LL SOILS

Tetra Tech
 5700 Lake Wright Dr, Ste 309
 Norfolk, VA 23502

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Attn: Ed Corack
 Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS51-0006
 Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24399
 QCG: #SIMDD-151117A-202551

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 23.6 Percent Moisture.)								
8270D-LL	2-METHYLNAPHTHALENE	0.0220 U	0.065	0.0220	0.0120	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHENE	0.0220 U	0.065	0.0220	0.0130	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHYLENE	0.014 J	0.065	0.0220	0.0120	mg/kg	11/17/15	11/22/15
8270D-LL	ANTHRACENE	0.016 J	0.065	0.0220	0.0100	mg/kg	11/17/15	11/22/15
8270D-LL	BENZ (A) ANTHRACENE	0.061 J	0.065	0.0220	0.0120	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (A) PYRENE	0.11	0.065	0.0220	0.0120	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (B) FLUORANTHENE	0.12	0.065	0.0220	0.0140	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (G,H,I) PERYLENE	0.13	0.065	0.0220	0.0170	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (K) FLUORANTHENE	0.0220 U	0.065	0.0220	0.0130	mg/kg	11/17/15	11/22/15
8270D-LL	CHRYSENE	0.22	0.065	0.0220	0.0100	mg/kg	11/17/15	11/22/15
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.033 J	0.065	0.0220	0.0120	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORANTHENE	0.47	0.065	0.0220	0.0160	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORENE	0.0220 U	0.065	0.0220	0.0130	mg/kg	11/17/15	11/22/15
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.072	0.065	0.0220	0.0120	mg/kg	11/17/15	11/22/15
8270D-LL	NAPHTHALENE	0.0220 U	0.065	0.0220	0.0120	mg/kg	11/17/15	11/22/15
8270D-LL	PHENANTHRENE	0.18	0.065	0.0220	0.0140	mg/kg	11/17/15	11/22/15
8270D-LL	PYRENE	0.30	0.065	0.0220	0.0160	mg/kg	11/17/15	11/22/15
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	DO	45-105			%	11/17/15	11/22/15
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	DO	35-100			%	11/17/15	11/22/15
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	DO	30-125			%	11/17/15	11/22/15

J = Estimated value.
 DO = Diluted Out.

Quant Method: P1112.M
Run #: 1112L181
Instrument: Linus
Sequence: L151112
Dilution Factor: 10
Initials: DA

Printed: 11/28/2015 12:44:28 PM
 IPPL-F1-SC-MCRes/MCPQL-REG MDLs-DO

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L181.D Vial: 81
 Acq On : 22 Nov 15 23:28 Operator: MA
 Sample : AZ24399S02 1/30.07G DF10 Inst : Linus
 Misc : soil Multiplr: 332.56

Quant Time: Nov 24 11:35 2015

Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8 (IS)	5.97	136	19517	2.50	ppb	0.00
6) Acenaphthene-D10 (IS)	8.01	164	9946	2.50	ppb	0.00
11) Phenanthrene-D10 (IS)	9.75	188	15621	2.50	ppb	0.00
15) Chrysene-D12 (IS)	12.90	240	20257	2.50	ppb	0.00
21) Perylene-D12 (IS)	15.45	264	10189	2.50	ppb	0.00

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	5.17	82	182	381.30	ppb	0.04
Spiked Amount	83.139		Recovery	=	458.628%	
7) Surrogate Recovery (FBP)	7.24	172	1048	67.87	ppb	0.01
Spiked Amount	83.139		Recovery	=	81.628%	
17) Surrogate Recovery (TPH)	11.61	244	1306	68.52	ppb	-0.01
Spiked Amount	83.139		Recovery	=	82.418%	

Target Compounds

					Qvalue
3) Naphthalene	6.01	128	141	5.40	ppb # 89
4) 2-Methylnaphthalene	6.82	142	128	35.64	ppb 79
5) 1-Methylnaphthalene	6.93	142	85	4.88	ppb 93
8) Acenaphthylene	7.84	152	268	10.92	ppb # 93
12) Phenanthrene	9.79	178	3295	138.53	ppb 95
13) Anthracene	9.85	178	269	12.27	ppb # 75
14) Fluoranthene	11.17	202	12080	357.52	ppb # 87
16) Pyrene	11.43	202	8081	228.85	ppb 99
18) Benz (a) anthracene	12.89	228	1471	46.70	ppb # 85
19) Chrysene	12.94	228	5329	170.61	ppb 99
20) Indeno (1,2,3-cd) pyrene	17.66	276	1743	55.30	ppb # 98
22) Benzo (b) fluoranthene	14.67	252	3766m	91.70	ppb 95
23) Benzo (k) fluoranthene	14.70	252	1153m	69.20	ppb 97
24) Benzo (a) pyrene	15.21	252	1835	83.76	ppb 95
25) Dibenz (a,h) anthracene	17.70	278	534	25.15	ppb # 85
26) Benzo (g,h,i) perylene	18.19	276	2315	101.91	ppb 98

2015/11/24

Quantitation Report

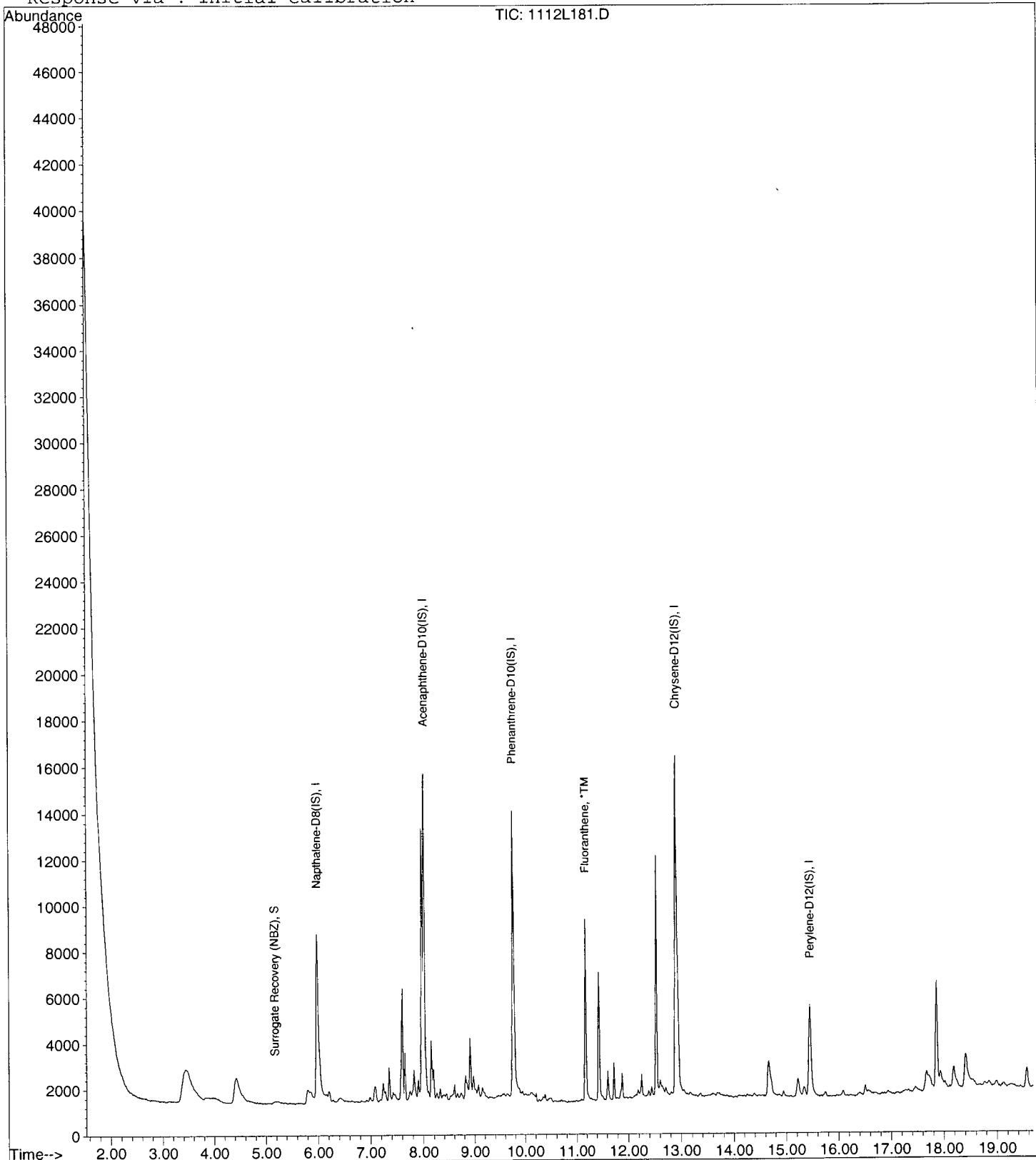
Data File : M:\LINUS\DATA\L151112\1112L181.D
Acq On : 22 Nov 15 23:28
Sample : AZ24399S02 1/30.07G DF10
Misc : soil

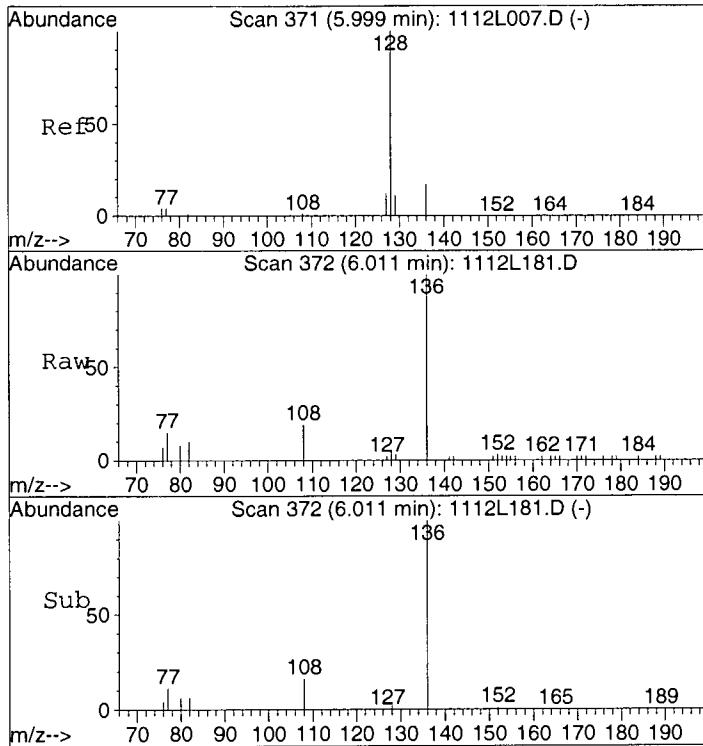
Vial: 81
Operator: MA
Inst : Linus
Multiplr: 332.56

Quant Time: Nov 24 11:35 2015

Quant Results File: P1112.RES

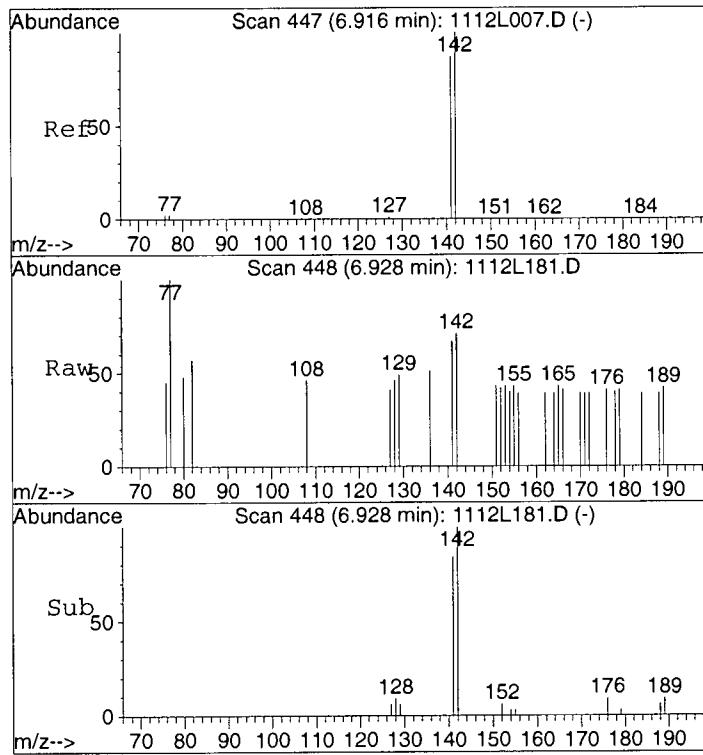
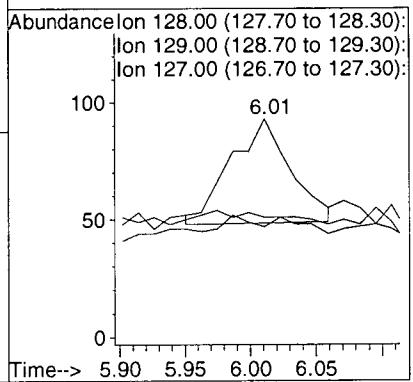
Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Nov 12 15:22:39 2015
Response via : Initial Calibration





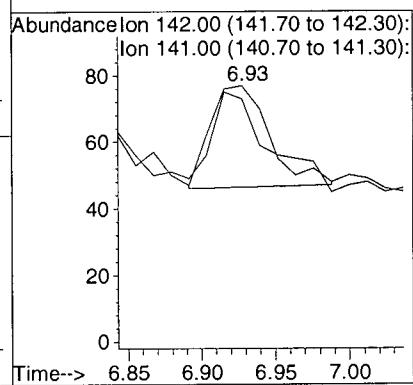
#3
 Naphthalene
 Concen: 5.40 ppb
 RT: 6.01 min Scan# 372
 Delta R.T. 0.01 min
 Lab File: 1112L181.D
 Acq: 22 Nov 15 23:28

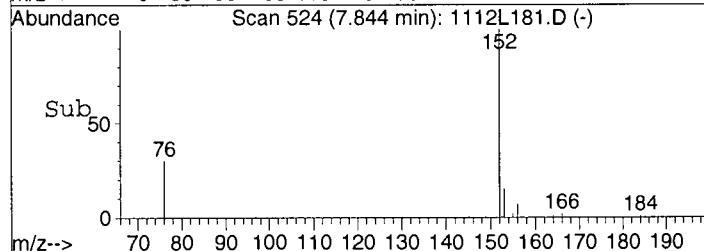
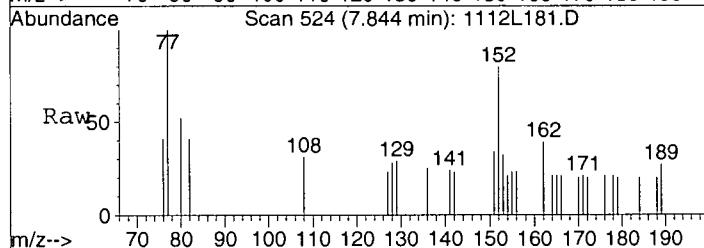
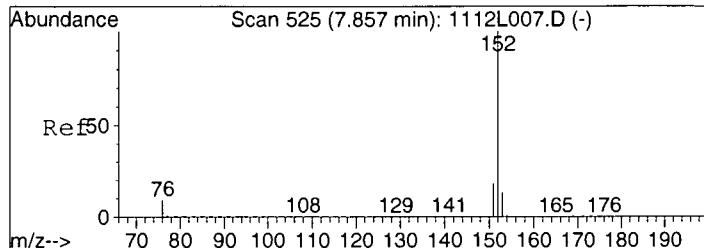
Tgt Ion:128 Resp: 141
 Ion Ratio Lower Upper
 128 100
 129 7.3 7.7 14.3#
 127 7.3 8.5 15.9#



#5
 1-Methylnaphthalene
 Concen: 4.88 ppb
 RT: 6.93 min Scan# 448
 Delta R.T. 0.01 min
 Lab File: 1112L181.D
 Acq: 22 Nov 15 23:28

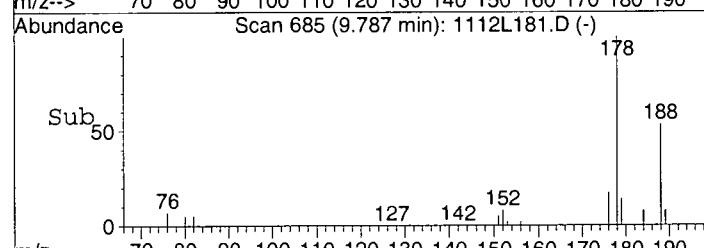
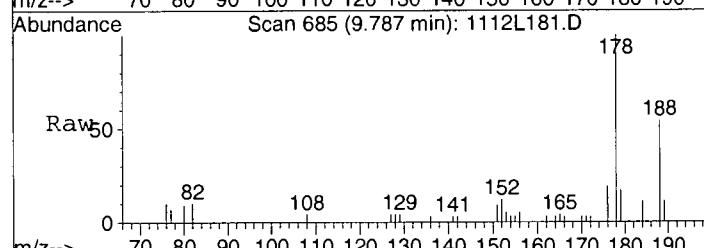
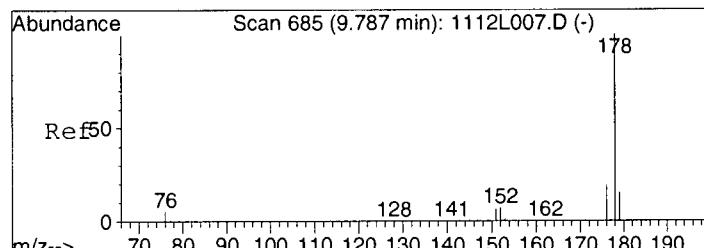
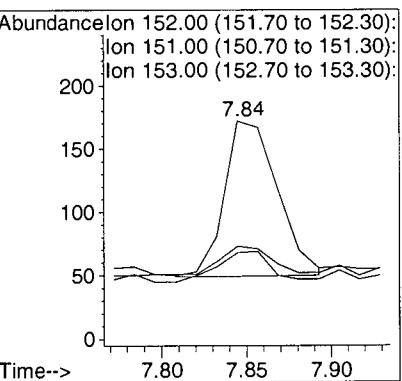
Tgt Ion:142 Resp: 85
 Ion Ratio Lower Upper
 142 100
 141 93.3 60.6 112.6





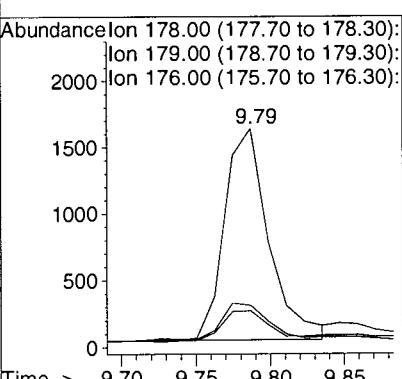
#8
 Acenaphthylene
 Concen: 10.92 ppb
 RT: 7.84 min Scan# 524
 Delta R.T. -0.01 min
 Lab File: 1112L181.D
 Acq: 22 Nov 15 23:28

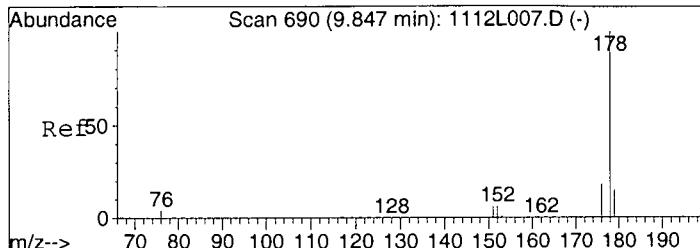
Tgt Ion:152 Resp: 268
 Ion Ratio Lower Upper
 152 100
 151 18.0 12.5 23.3
 153 18.9 8.9 16.5#



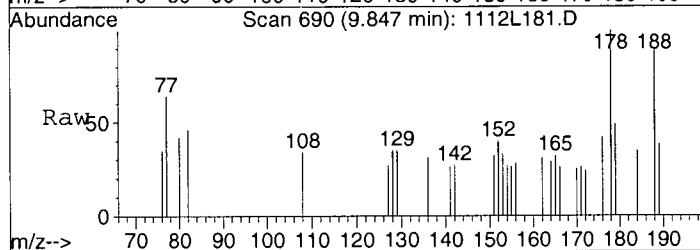
#12
 Phenanthrene
 Concen: 138.53 ppb
 RT: 9.79 min Scan# 685
 Delta R.T. -0.00 min
 Lab File: 1112L181.D
 Acq: 22 Nov 15 23:28

Tgt Ion:178 Resp: 3295
 Ion Ratio Lower Upper
 178 100
 179 14.2 10.9 20.2
 176 15.9 13.4 24.8

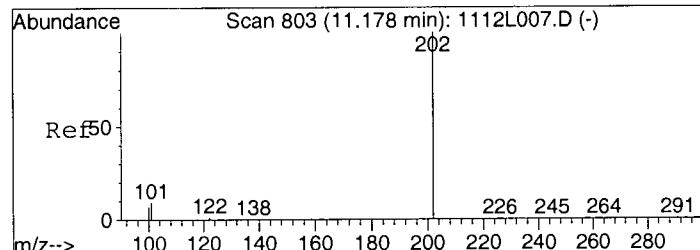
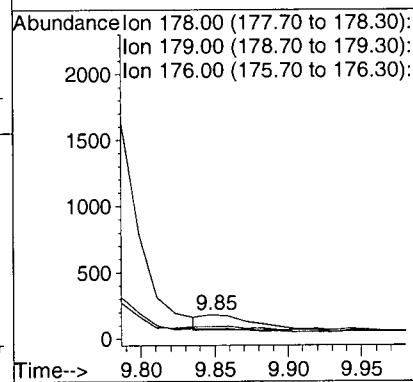
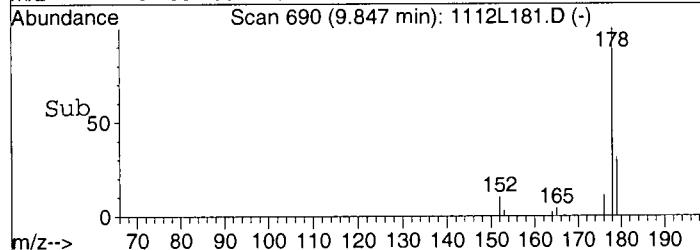




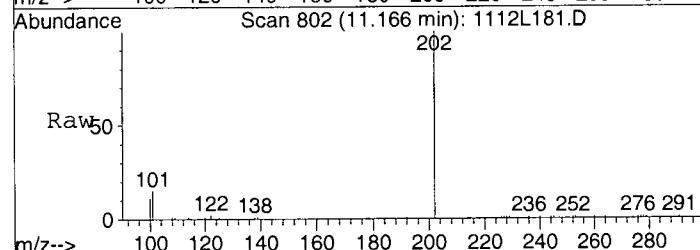
#13
Anthracene
Concen: 12.27 ppb
RT: 9.85 min Scan# 690
Delta R.T. -0.00 min
Lab File: 1112L181.D
Acq: 22 Nov 15 23:28



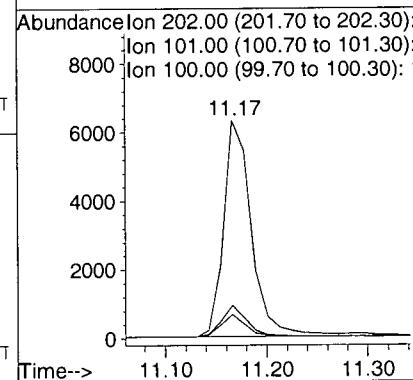
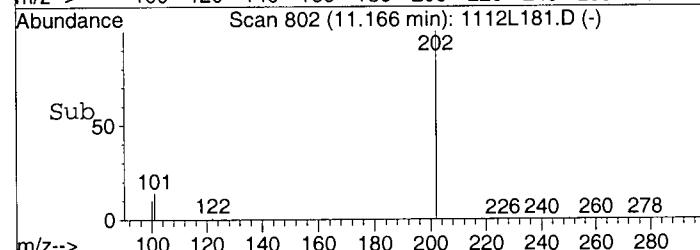
Tgt Ion:178 Resp: 269
Ion Ratio Lower Upper
178 100
179 33.0 10.5 19.5#
176 22.6 12.8 23.8

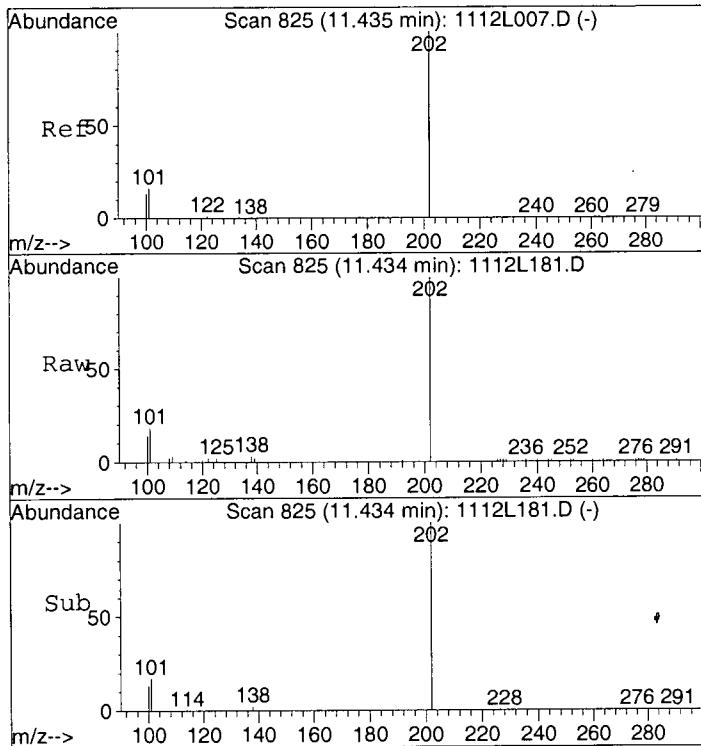


#14
Fluoranthene
Concen: 357.52 ppb
RT: 11.17 min Scan# 802
Delta R.T. -0.01 min
Lab File: 1112L181.D
Acq: 22 Nov 15 23:28



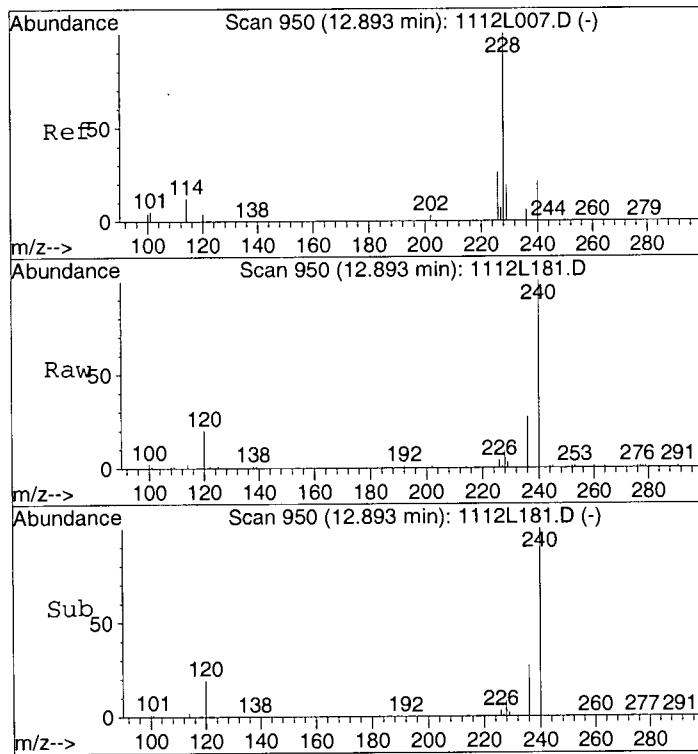
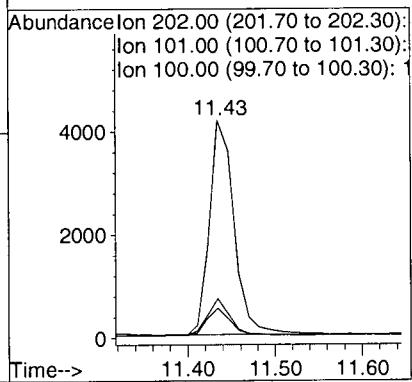
Tgt Ion:202 Resp: 12080
Ion Ratio Lower Upper
202 100
101 14.4 6.4 11.8#
100 10.3 4.8 8.8#





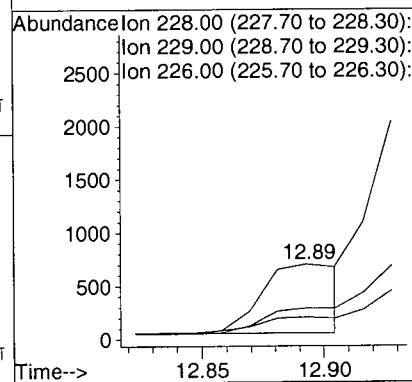
#16
 Pyrene
 Concen: 228.85 ppb
 RT: 11.43 min Scan# 825
 Delta R.T. -0.00 min
 Lab File: 1112L181.D
 Acq: 22 Nov 15 23:28

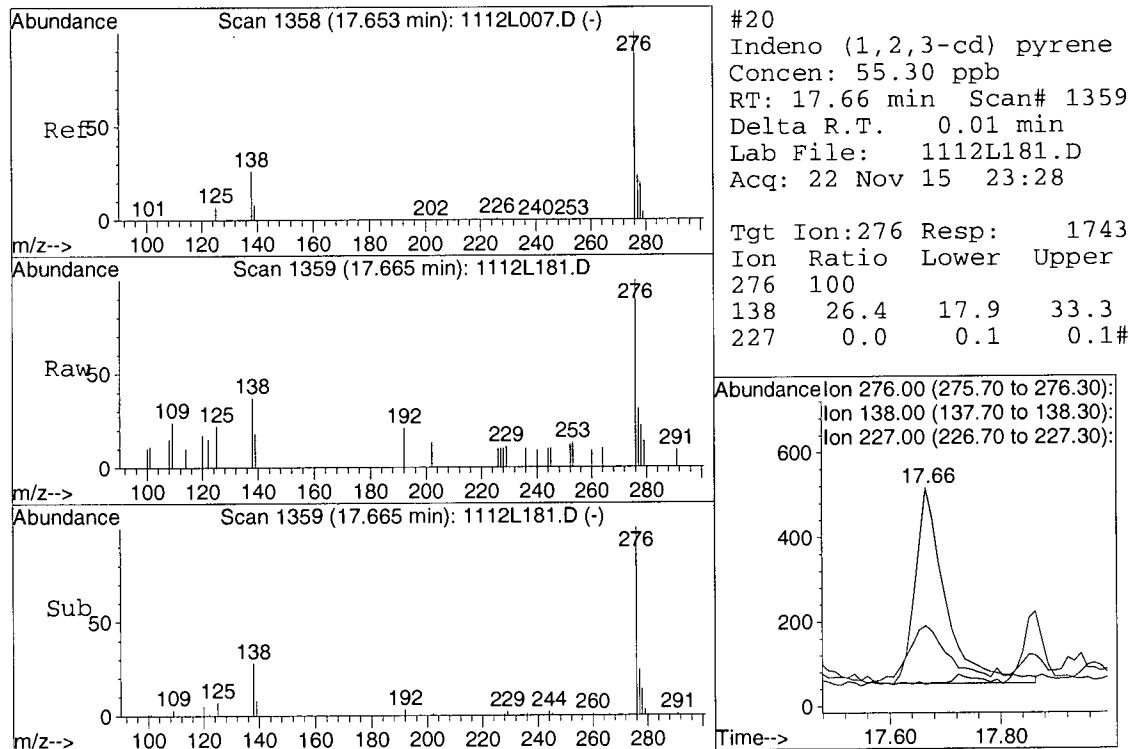
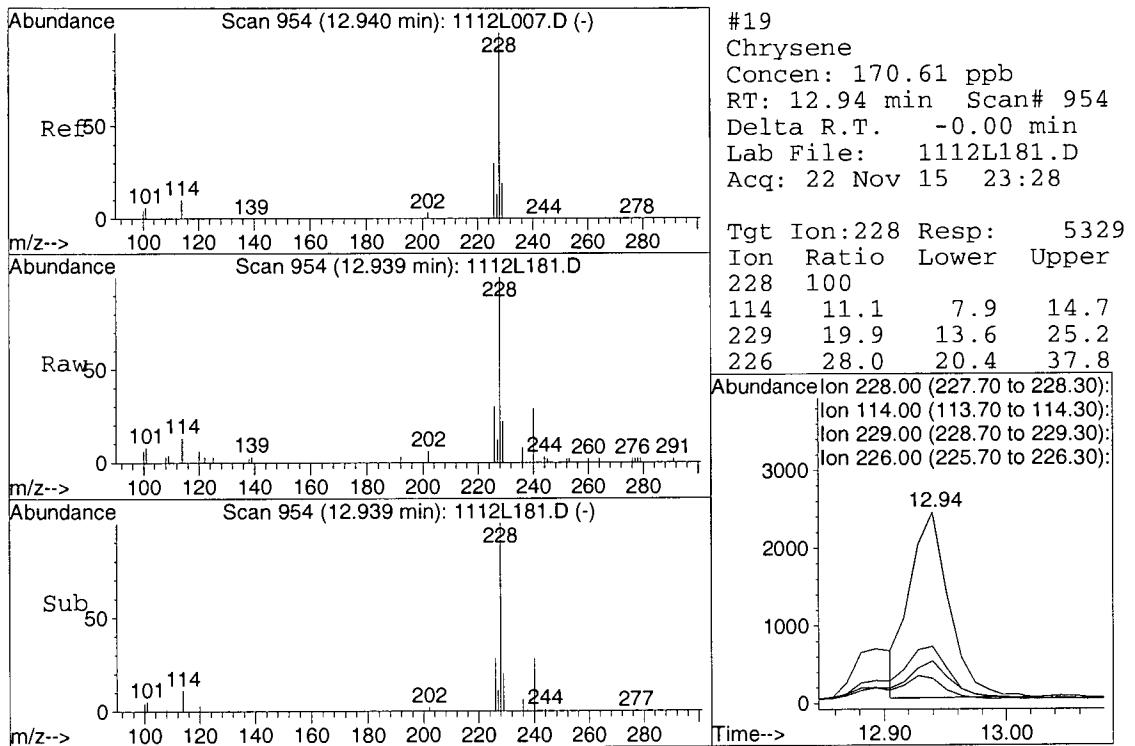
Tgt Ion: 202 Resp: 8081
 Ion Ratio Lower Upper
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 101 16.9 11.2 20.8
 100 12.7 8.9 16.5

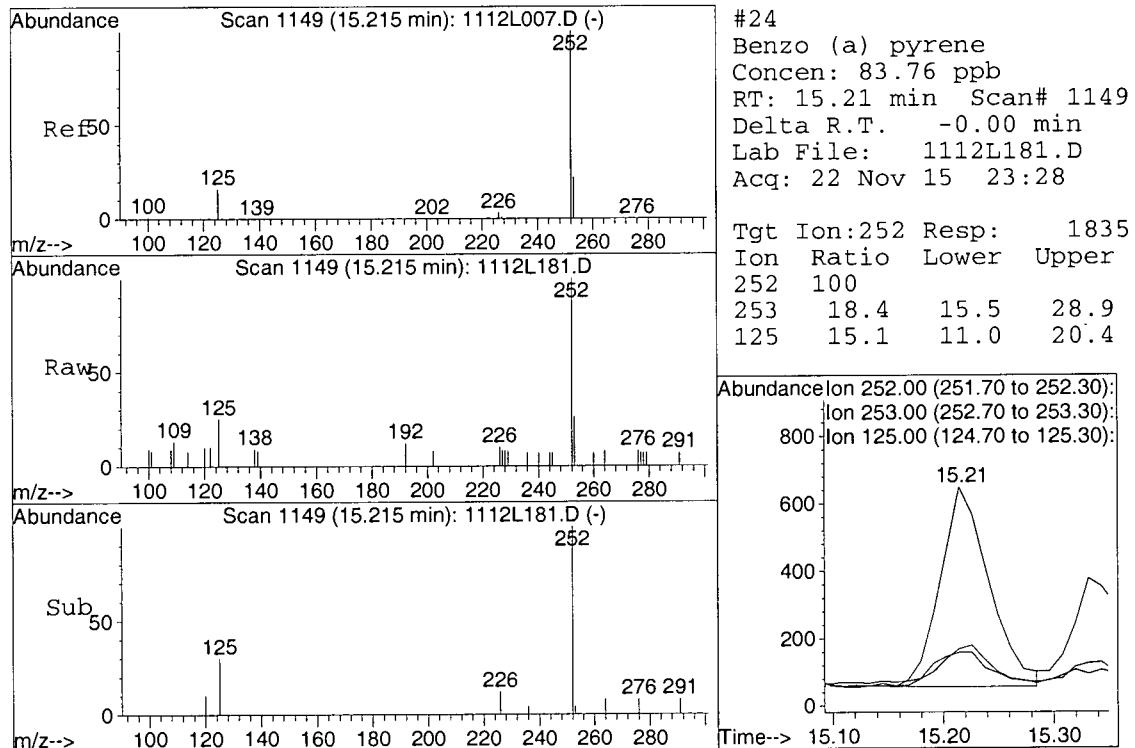
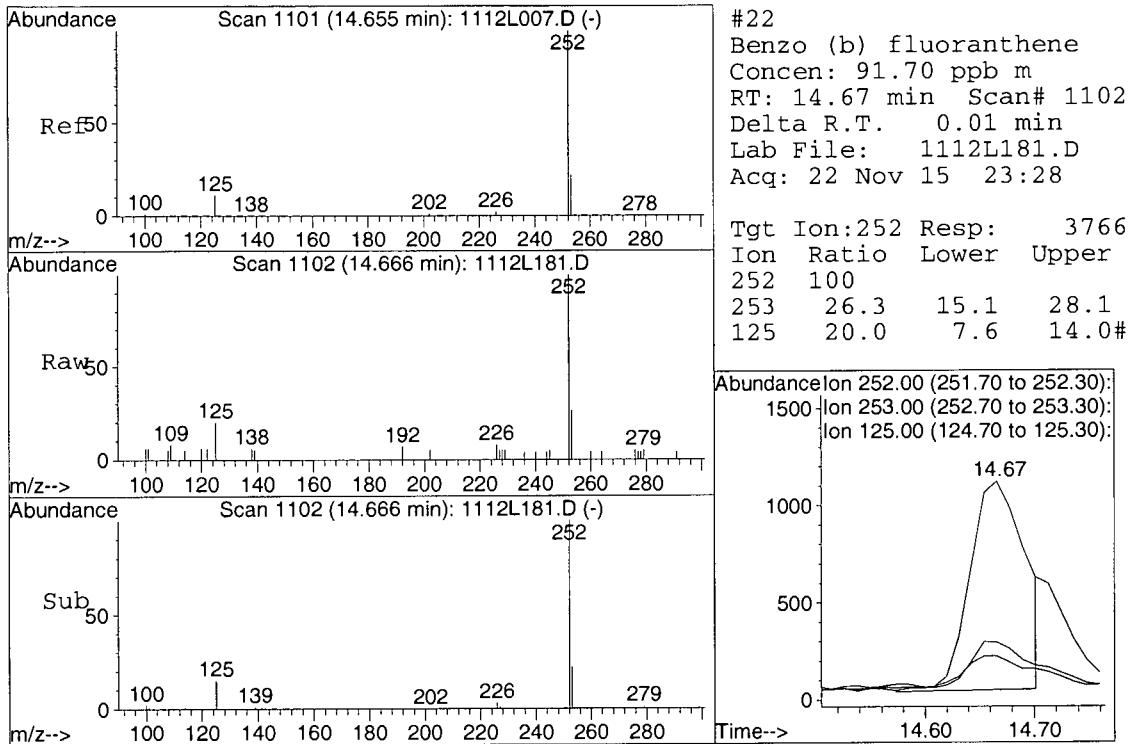


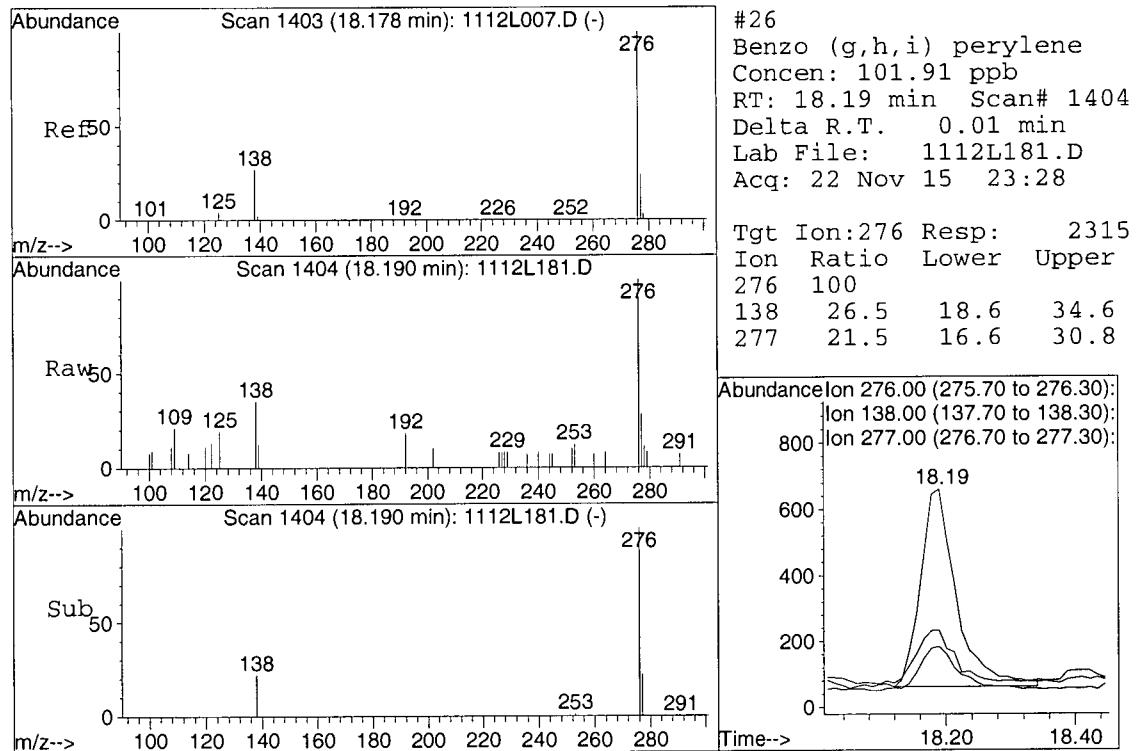
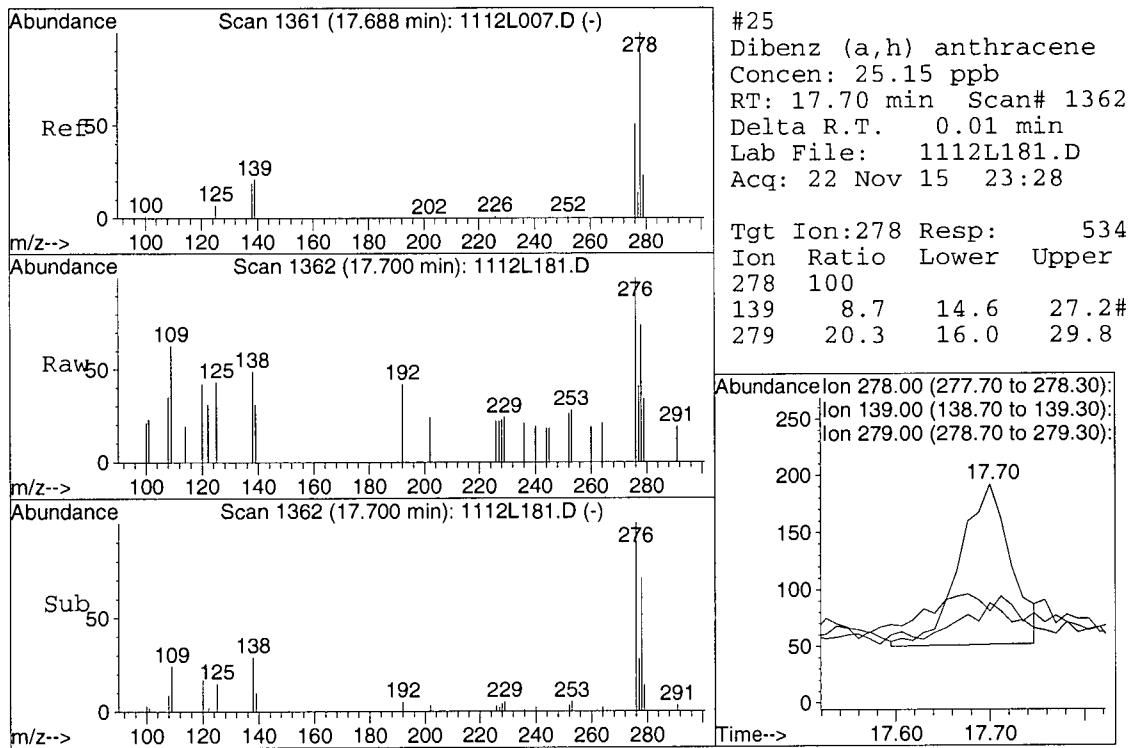
#18
 Benz (a) anthracene
 Concen: 46.70 ppb
 RT: 12.89 min Scan# 950
 Delta R.T. -0.00 min
 Lab File: 1112L181.D
 Acq: 22 Nov 15 23:28

Tgt Ion: 228 Resp: 1471
 Ion Ratio Lower Upper
 228 100
 229 22.1 13.6 25.2
 226 37.2 18.0 33.4#





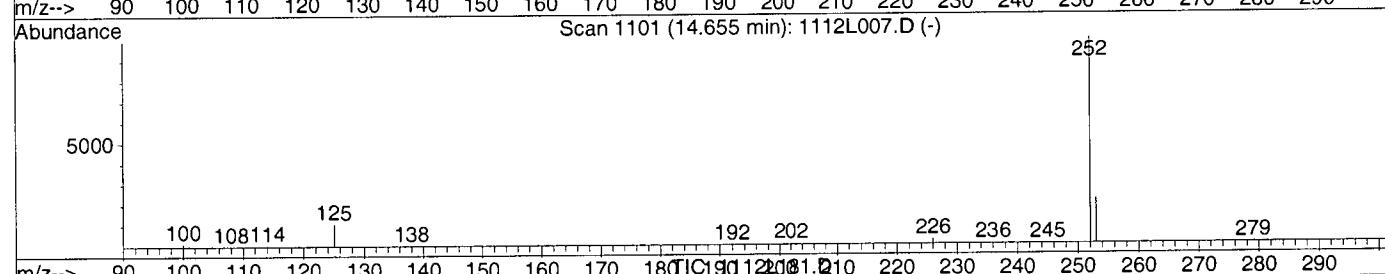
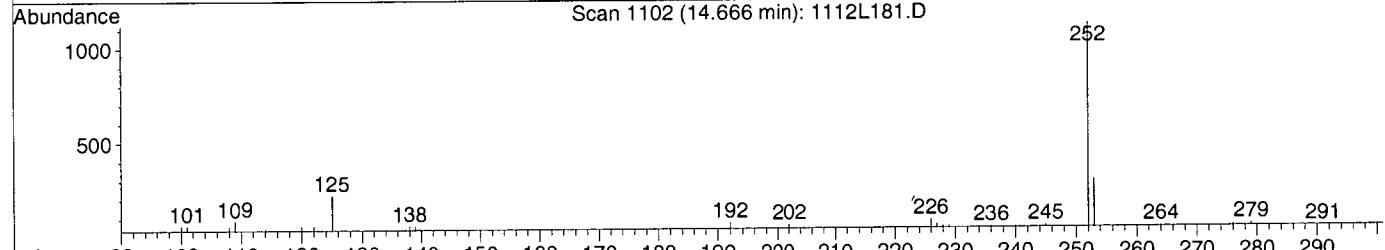
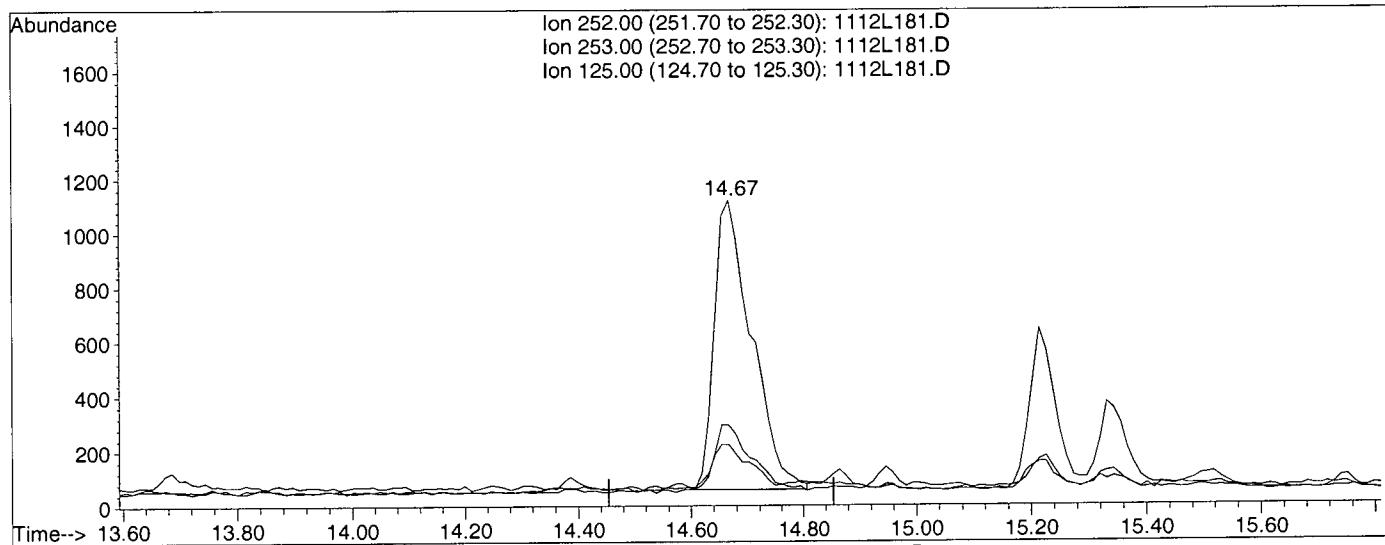




Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L181.D Vial: 81
 Acq On : 22 Nov 15 23:28 Operator: MA
 Sample : AZ24399S02 1/30.07G DF10 Inst : Linus
 Misc : soil Multiplr: 332.56
 Quant Time: Nov 24 11:34 2015 Quant Results File: temp.res

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Multiple Level Calibration



(22) Benzo (b) fluoranthene (TM)

14.67min 129.4639ppb

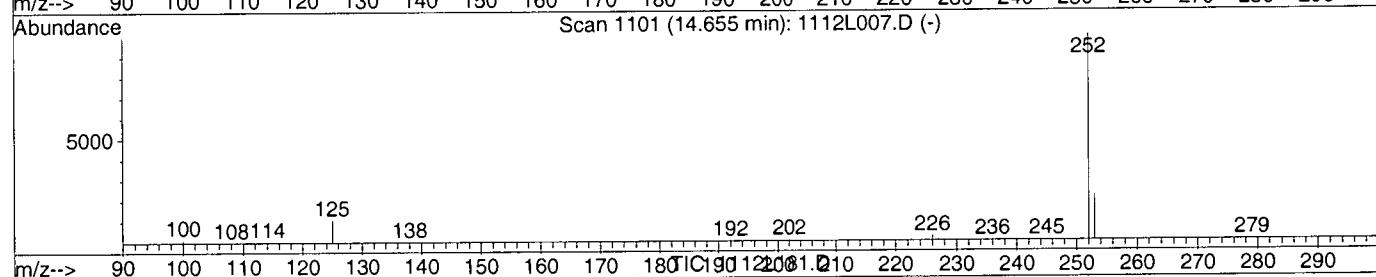
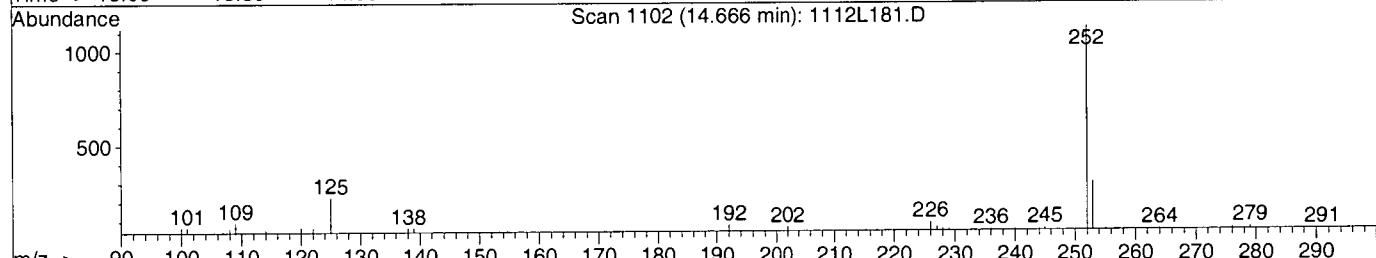
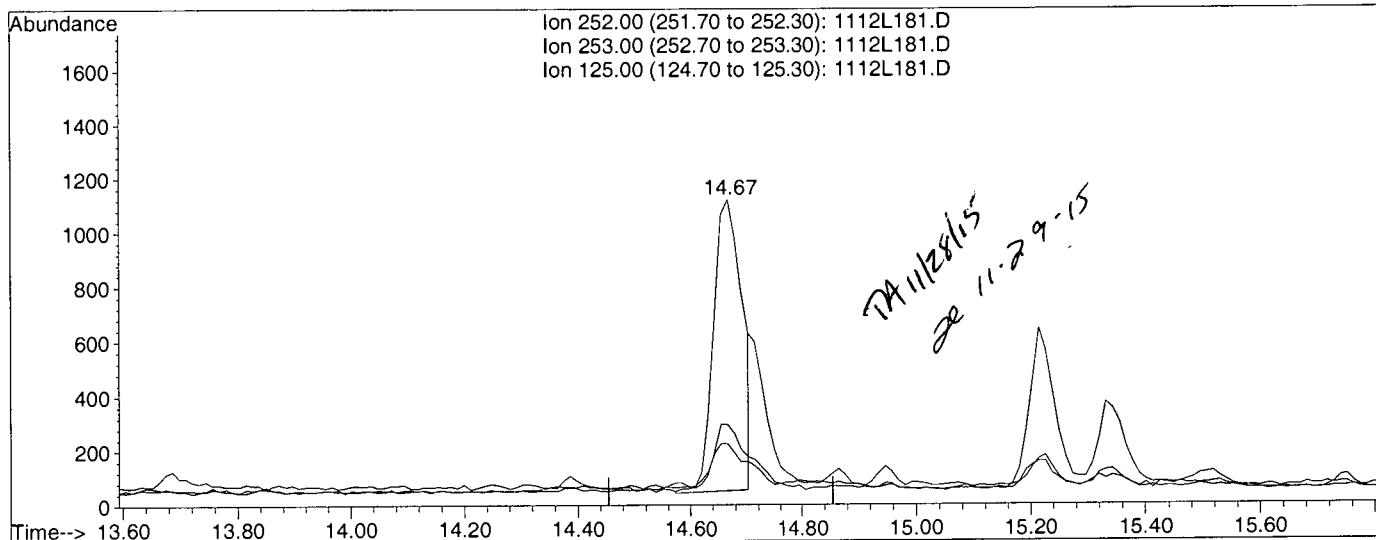
response 4787

Ion	Exp%	Act%
252.00	100	100
253.00	21.60	22.58
125.00	10.80	14.86#
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L181.D Vial: 81
 Acq On : 22 Nov 15 23:28 Operator: MA
 Sample : AZ24399S02 1/30.07G DF10 Inst : Linus
 Misc : soil Multiplr: 332.56
 Quant Time: Nov 24 11:35 2015 Quant Results File: temp.res

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Multiple Level Calibration



(22) Benzo (b) fluoranthene (TM)

14.67min 91.6956ppb m

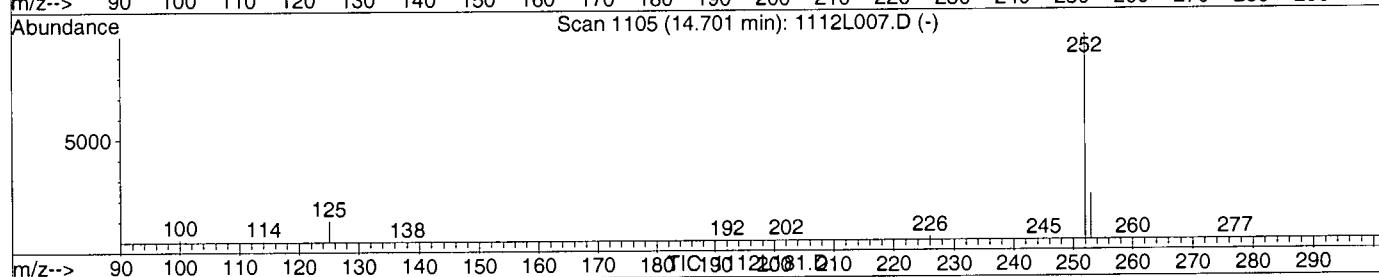
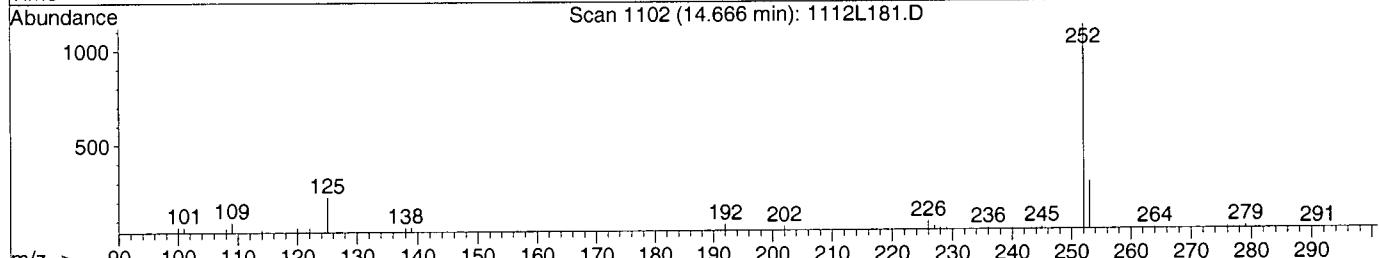
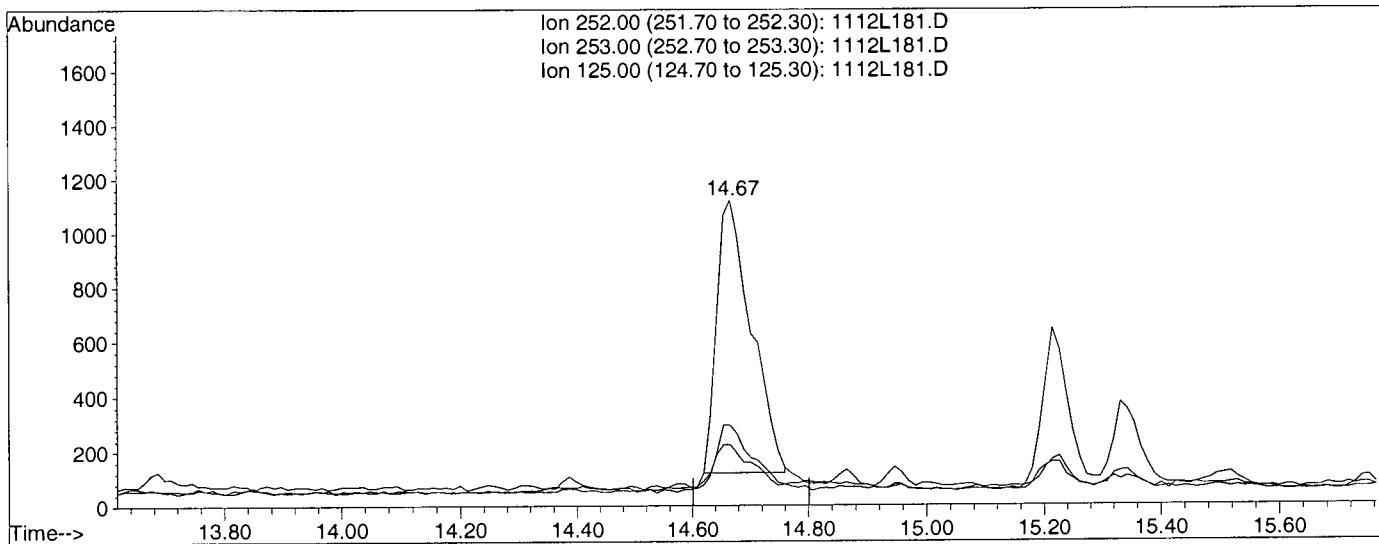
response 3766

Ion	Exp%	Act%
252.00	100	100
253.00	21.60	26.29
125.00	10.80	19.96#
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L181.D Vial: 81
 Acq On : 22 Nov 15 23:28 Operator: MA
 Sample : AZ24399S02 1/30.07G DF10 Inst : Linus
 Misc : soil Multiplr: 332.56
 Quant Time: Nov 24 11:35 2015 Quant Results File: temp.res

 Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Multiple Level Calibration



(23) Benzo (k) fluoranthene (TM)

14.67min 71.7556ppb

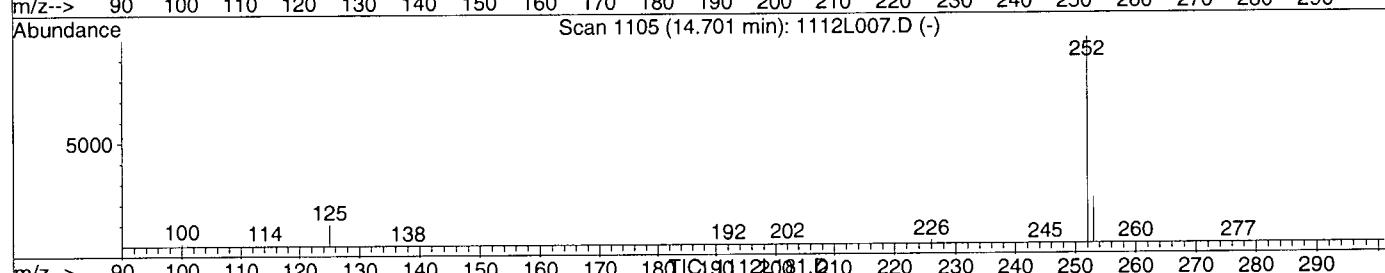
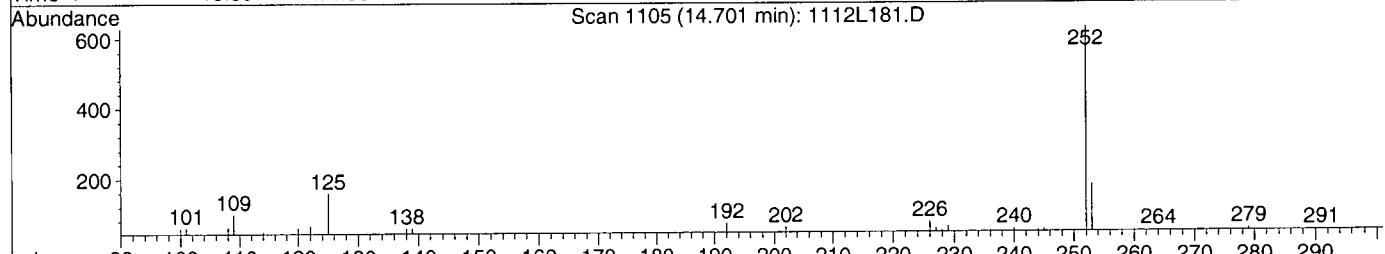
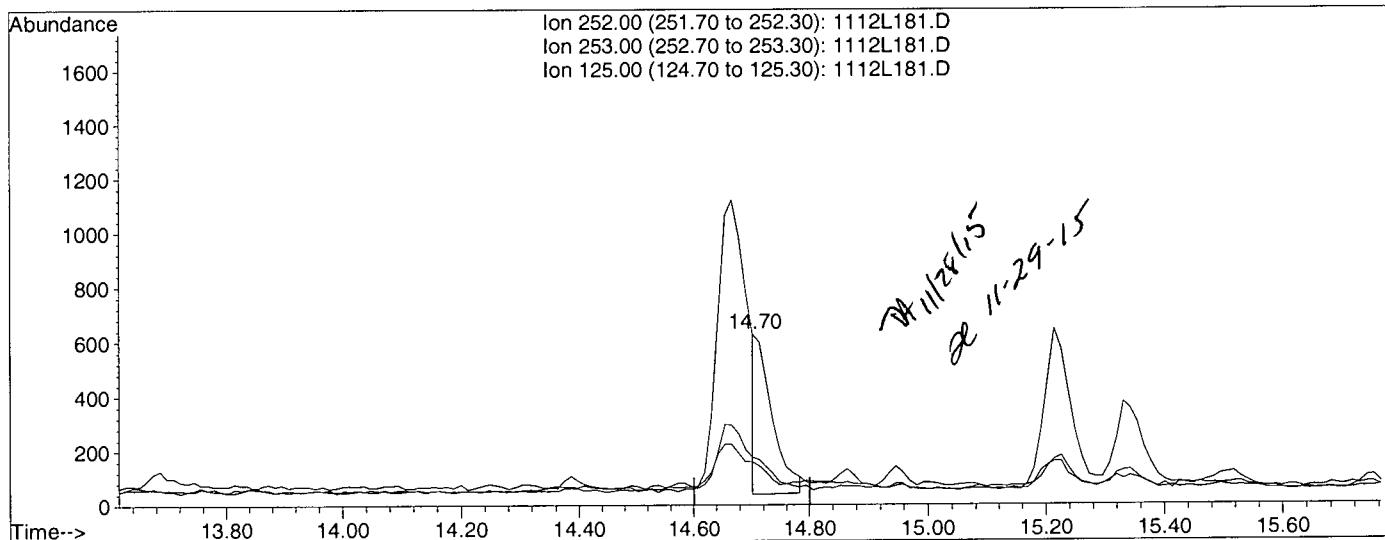
response 4119

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	21.86
125.00	11.90	14.57
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L181.D Vial: 81
 Acq On : 22 Nov 15 23:28 Operator: MA
 Sample : AZ24399S02 1/30.07G DF10 Inst : Linus
 Misc : soil Multiplr: 332.56
 Quant Time: Nov 24 11:35 2015 Quant Results File: temp.res

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Multiple Level Calibration



(23) Benzo (k) fluoranthene (TM)

14.70min -69.2015ppb m

response 1153

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	28.10
125.00	11.90	25.24#
0.00	0.00	0.00

EPA 8270D LL SOILS

Tetra Tech
 5700 Lake Wright Dr, Ste 309
 Norfolk, VA 23502

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Attn: Ed Corack
 Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS52-0006
 Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24400
 QCG: #SIMDD-151117A-202551

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 19.0 Percent Moisture.)								
8270D-LL	2-METHYLNAPHTHALENE	0.0021 U	0.006	0.0021	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHENE	0.0032 J	0.006	0.0021	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	ACENAPHTHYLENE	0.0053 J	0.006	0.0021	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	ANTHRACENE	0.013	0.006	0.0021	0.0010	mg/kg	11/17/15	11/22/15
8270D-LL	BENZ (A) ANTHRACENE	0.036	0.006	0.0021	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (A) PYRENE	0.028	0.006	0.0021	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (B) FLUORANTHENE	0.045	0.006	0.0021	0.0014	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (G,H,I) PERYLENE	0.023	0.006	0.0021	0.0016	mg/kg	11/17/15	11/22/15
8270D-LL	BENZO (K) FLUORANTHENE	0.0028 J	0.006	0.0021	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	CHRYSENE	0.043	0.006	0.0021	0.0010	mg/kg	11/17/15	11/22/15
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.0075	0.006	0.0021	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORANTHENE	0.097	0.006	0.0021	0.0015	mg/kg	11/17/15	11/22/15
8270D-LL	FLUORENE	0.0045 J	0.006	0.0021	0.0012	mg/kg	11/17/15	11/22/15
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.015	0.006	0.0021	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	NAPHTHALENE	0.0032 J	0.006	0.0021	0.0011	mg/kg	11/17/15	11/22/15
8270D-LL	PHENANTHRENE	0.090	0.006	0.0021	0.0014	mg/kg	11/17/15	11/22/15
8270D-LL	PYRENE	0.065	0.006	0.0021	0.0015	mg/kg	11/17/15	11/22/15
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	67.3	45-105			%	11/17/15	11/22/15
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	93.0	35-100			%	11/17/15	11/22/15
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	78.0	30-125			%	11/17/15	11/22/15

J = Estimated value.

Quant Method: P1112.M
Run #: 1112L182
Instrument: Linus
Sequence: L151112
Dilution Factor: 1
Initials: DA

Printed: 11/25/2015 8:52:07 AM
 IPPL-F1-SC-MCRes/MCQL-REG MDLs-DO

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L182.D Vial: 82
 Acq On : 22 Nov 15 23:56 Operator: MA
 Sample : AZ24400S02 1/30.08G Inst : Linus
 Misc : soil Multiplr: 33.24

Quant Time: Nov 24 11:37 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-D8(IS)	5.97	136	19856	2.50	ppb	0.00
6) Acenaphthene-D10(IS)	8.01	164	9828	2.50	ppb	0.00
11) Phenanthrene-D10(IS)	9.75	188	15443	2.50	ppb	0.00
15) Chrysene-D12(IS)	12.90	240	19860	2.50	ppb	0.00
21) Perylene-D12(IS)	15.45	264	10479	2.50	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) Surrogate Recovery (NBZ)	5.14	82	3681	77.26	ppb	0.01
Spiked Amount 83.112			Recovery	=	92.953%	
7) Surrogate Recovery (FBP)	7.23	172	8541	55.95	ppb	0.00
Spiked Amount 83.112			Recovery	=	67.325%	
17) Surrogate Recovery (TPH)	11.61	244	12110	64.79	ppb	-0.01
Spiked Amount 83.112			Recovery	=	77.951%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Naphthalene	6.00	128	682	2.57	ppb	94
4) 2-Methylnaphthalene	6.81	142	356	-2.27	ppb	99
5) 1-Methylnaphthalene	6.92	142	401	2.26	ppb	97
8) Acenaphthylene	7.86	152	1042	4.29	ppb	# 89
9) Acenaphthene	8.05	154	372	2.57	ppb	94
10) Fluorene	8.65	166	641	3.64	ppb	90
12) Phenanthrene	9.77	178	17134	72.84	ppb	98
13) Anthracene	9.85	178	2206	10.18	ppb	93
14) Fluoranthene	11.17	202	26376	78.94	ppb	# 92
16) Pyrene	11.43	202	18326	52.92	ppb	97
18) Benz (a) anthracene	12.88	228	8947	28.96	ppb	94
19) Chrysene	12.94	228	10666	34.82	ppb	99
20) Indeno (1,2,3-cd) pyrene	17.65	276	3784	12.24	ppb	# 86
22) Benzo (b) fluoranthene	14.65	252	11431m	36.34	ppb	96
23) Benzo (k) fluoranthene	14.69	252	3172m	2.26	ppb	96
24) Benzo (a) pyrene	15.21	252	5194	23.04	ppb	95
25) Dibenz (a,h) anthracene	17.68	278	1323	6.06	ppb	# 91
26) Benzo (g,h,i) perylene	18.18	276	4363	18.67	ppb	97

Quantitation Report

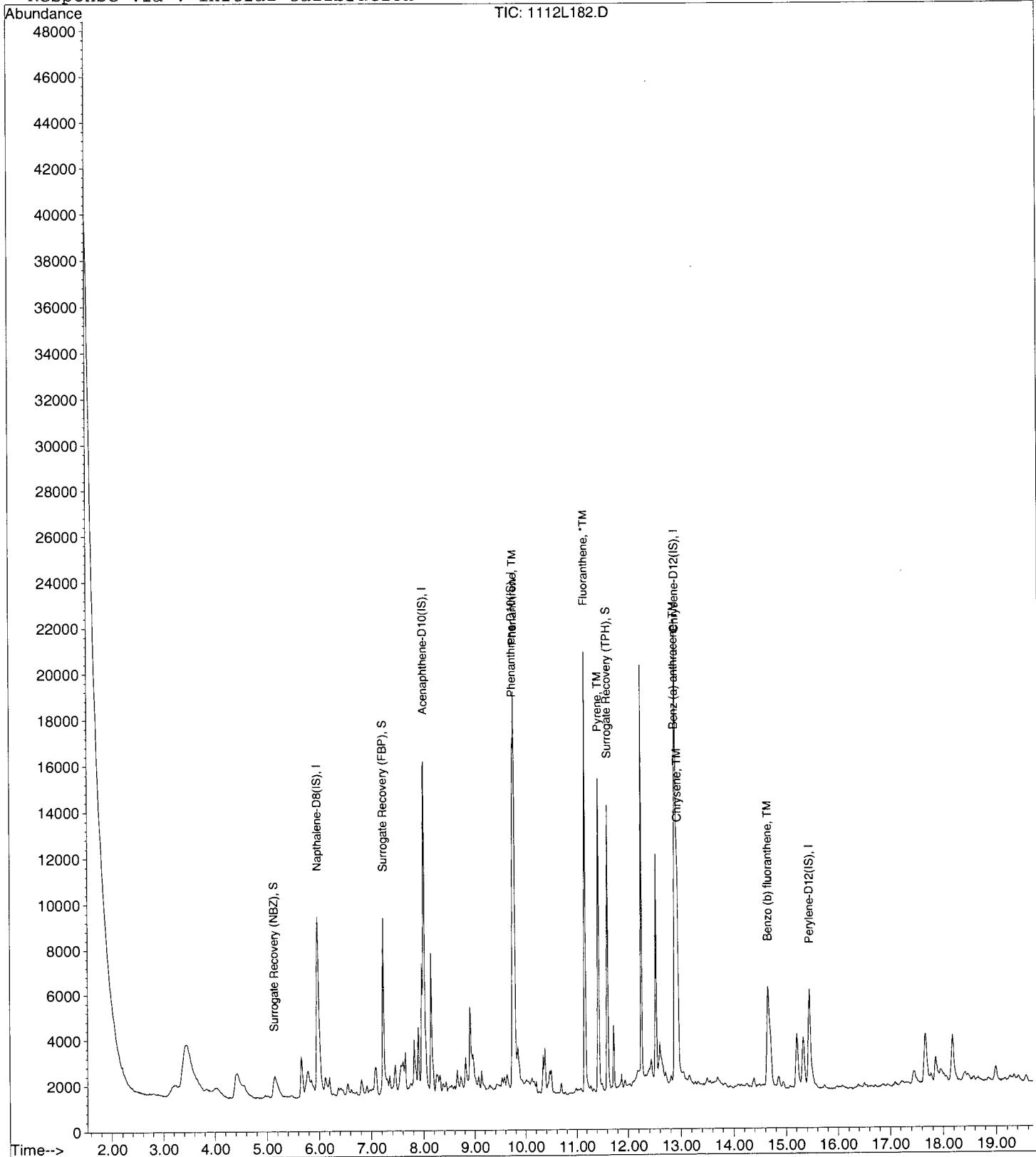
Data File : M:\LINUS\DATA\L151112\1112L182.D
 Acq On : 22 Nov 15 23:56
 Sample : AZ24400S02 1/30.08G
 Misc : soil

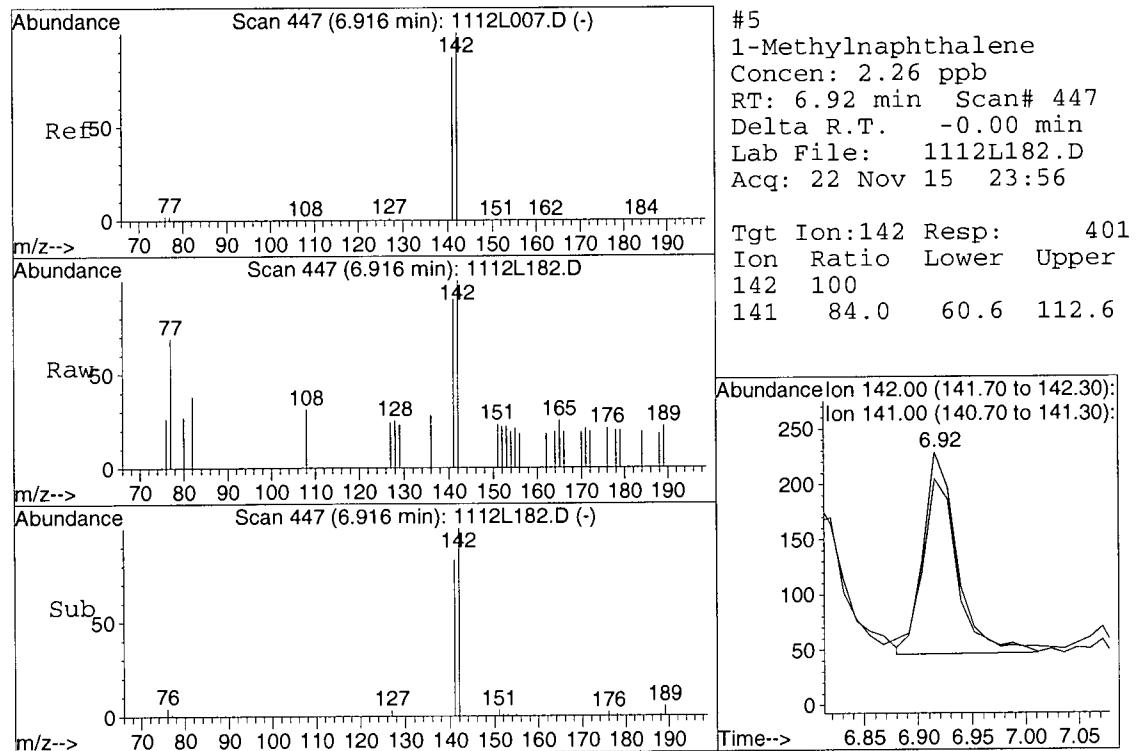
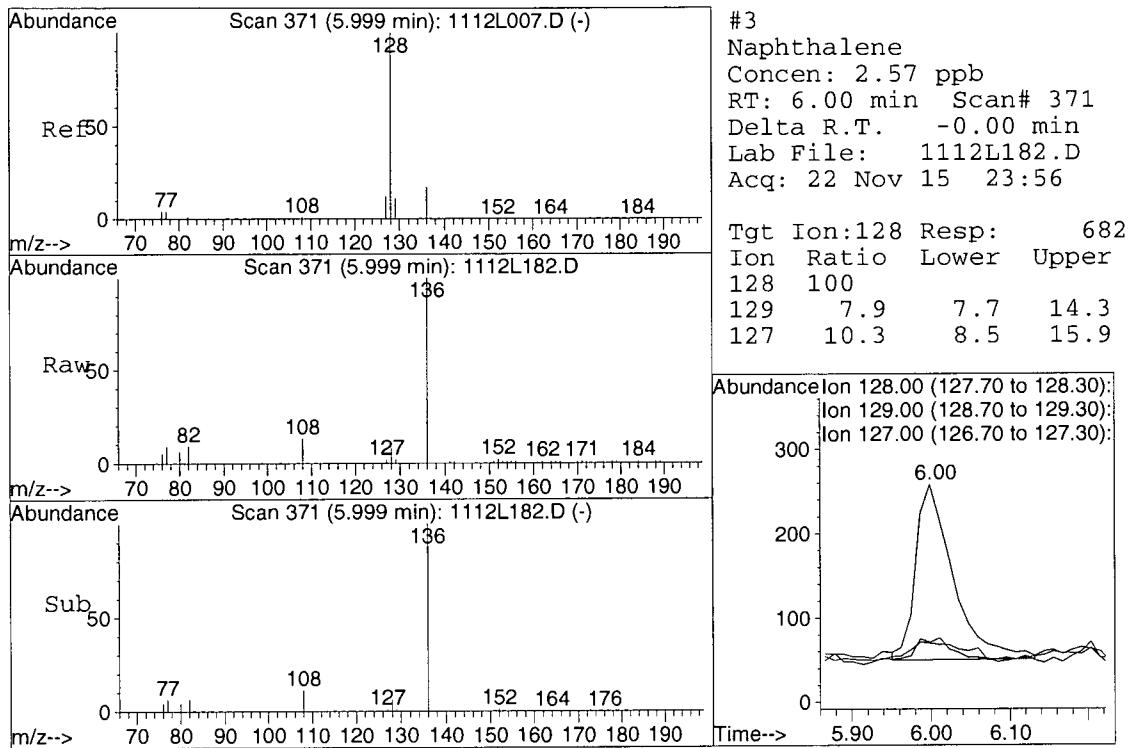
Vial: 82
 Operator: MA
 Inst : Linus
 Multiplr: 33.24

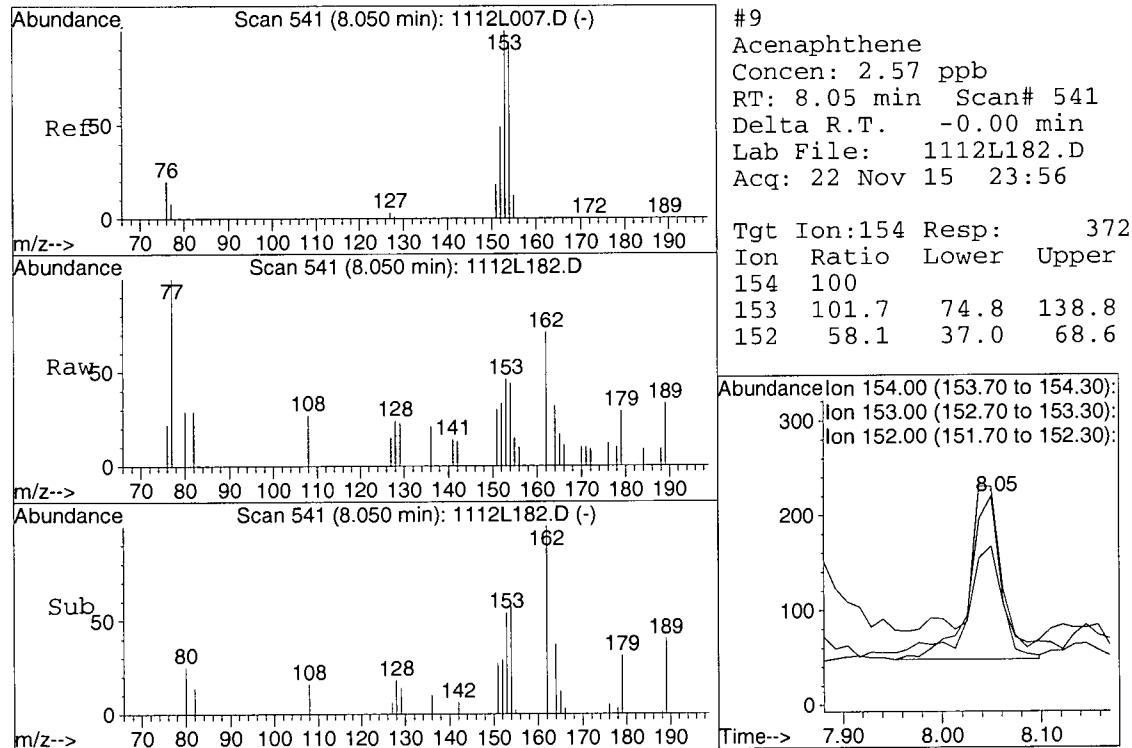
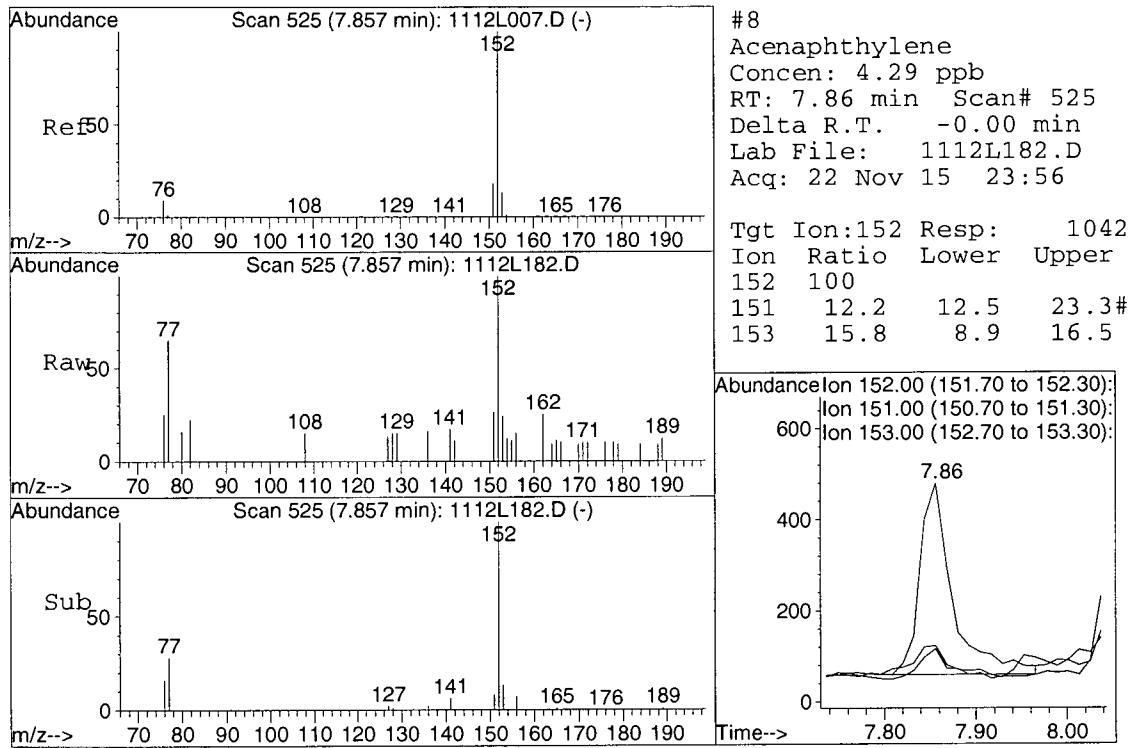
Quant Time: Nov 24 11:37 2015

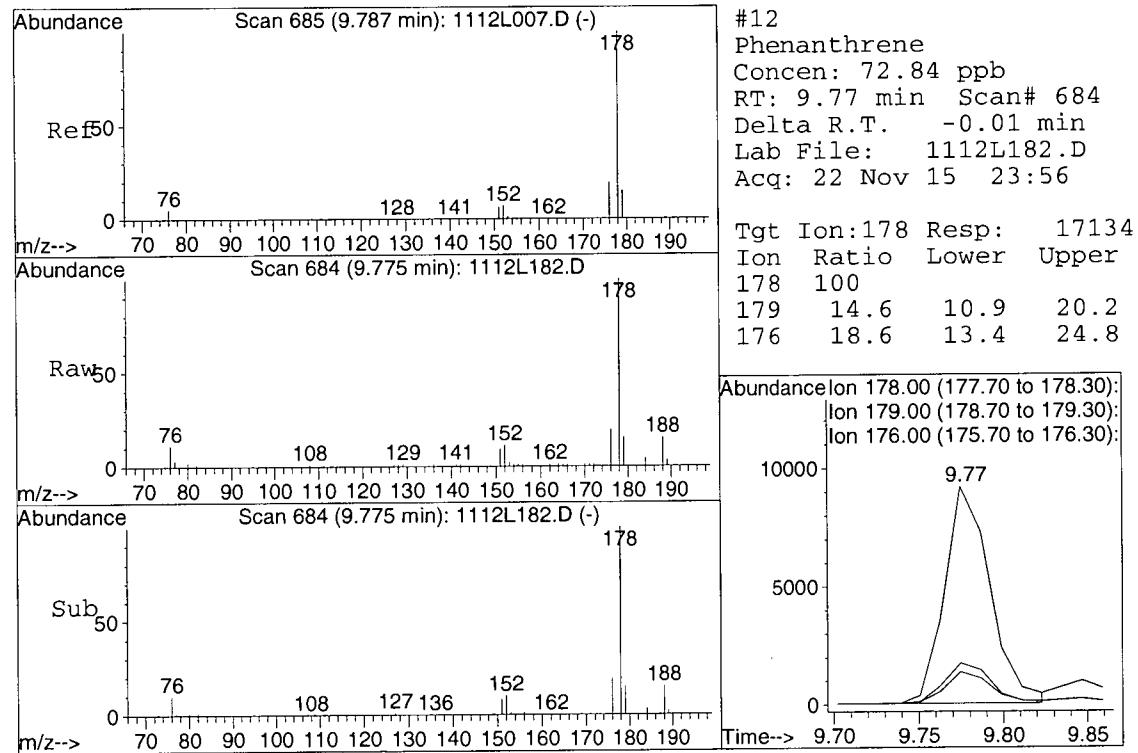
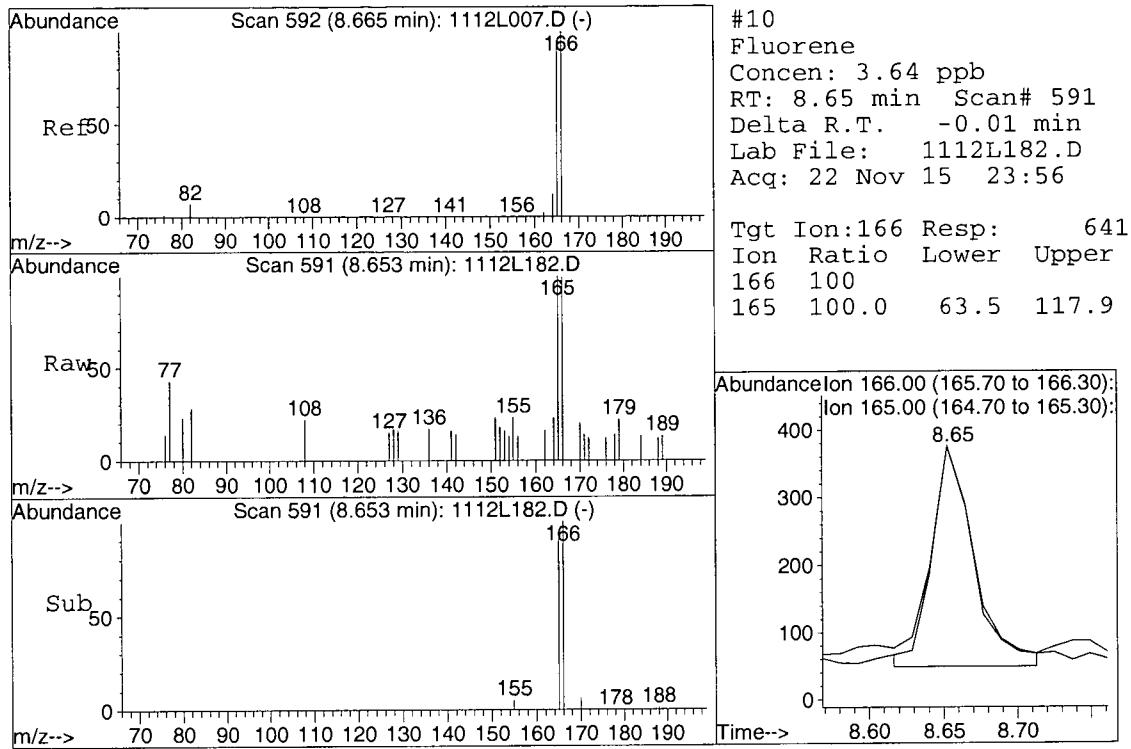
Quant Results File: P1112.RES

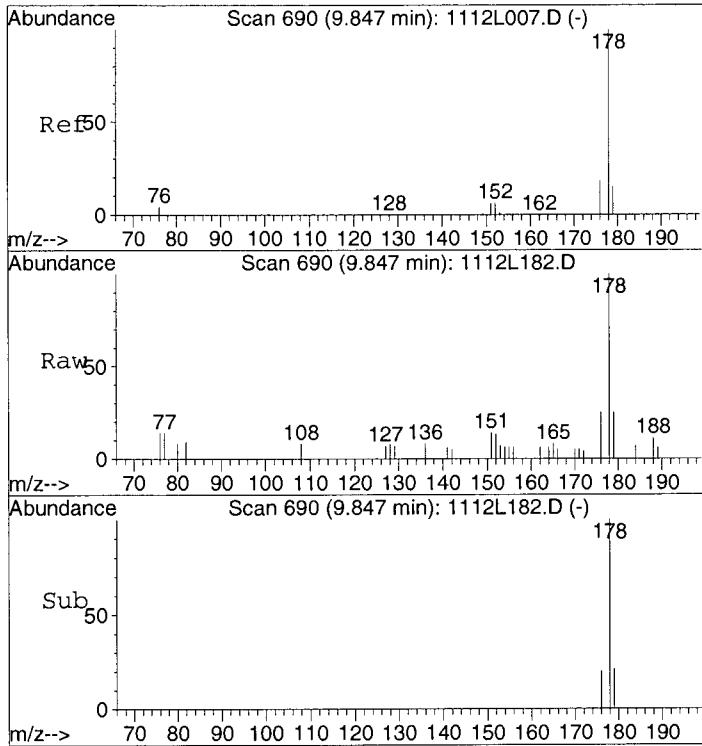
Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration





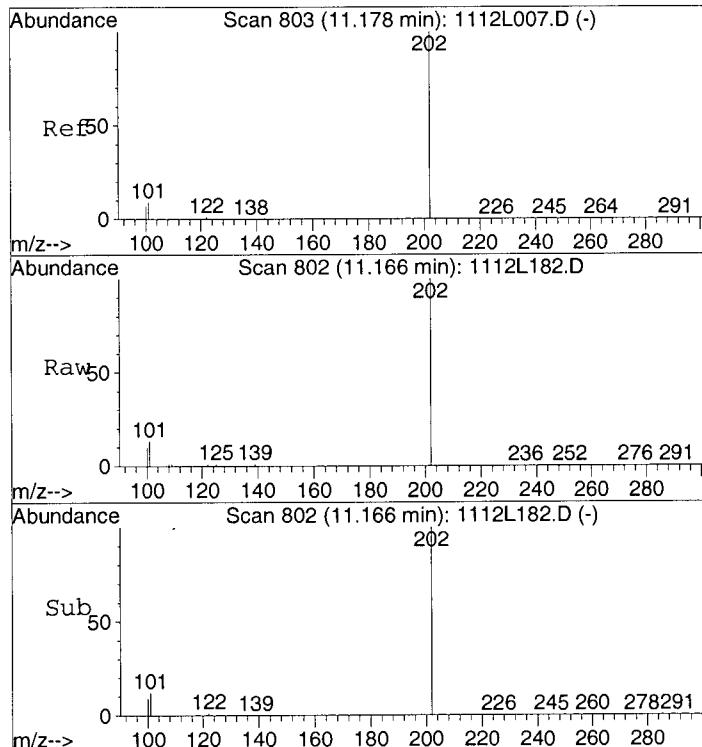
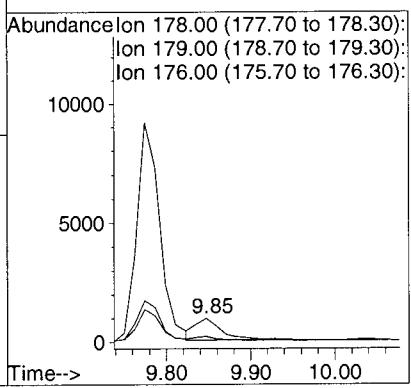






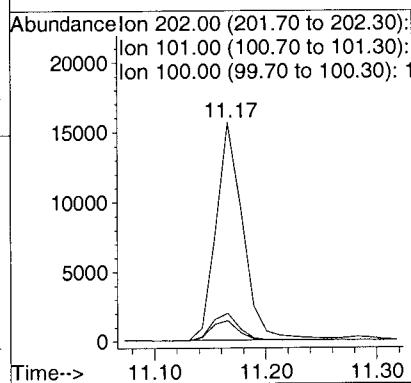
#13
Anthracene
Concen: 10.18 ppb
RT: 9.85 min Scan# 690
Delta R.T. -0.00 min
Lab File: 1112L182.D
Acq: 22 Nov 15 23:56

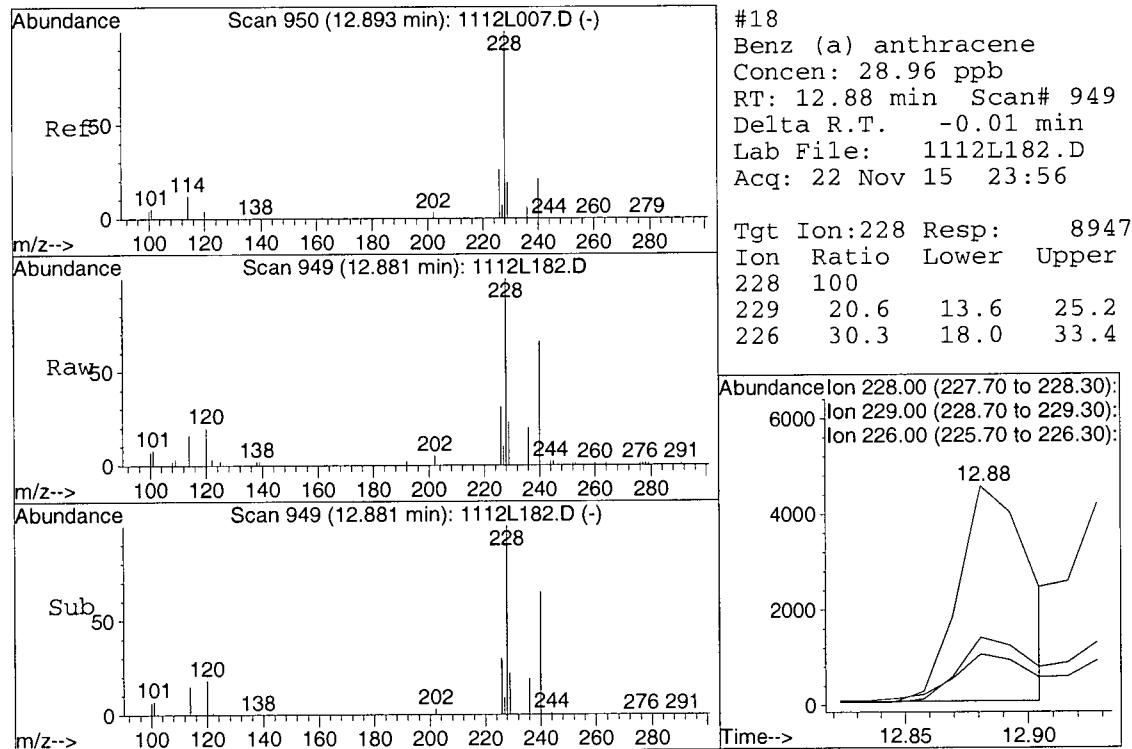
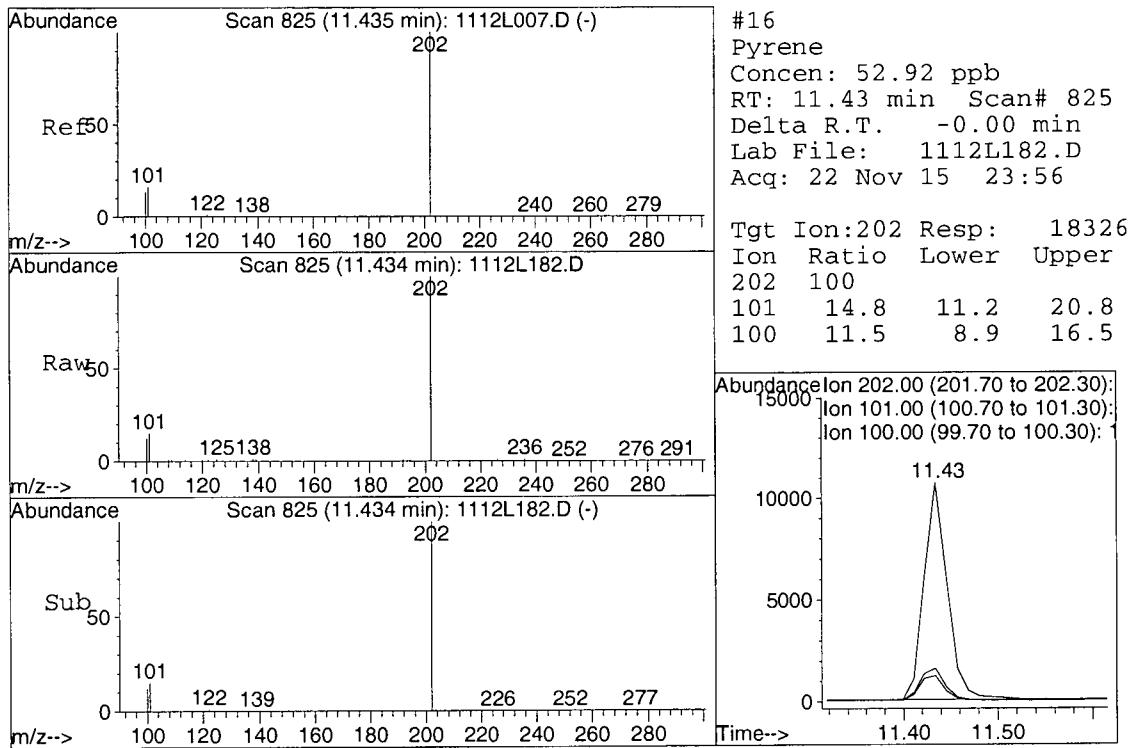
Tgt Ion:178 Resp: 2206
Ion Ratio Lower Upper
178 100
179 18.9 10.5 19.5
176 20.5 12.8 23.8

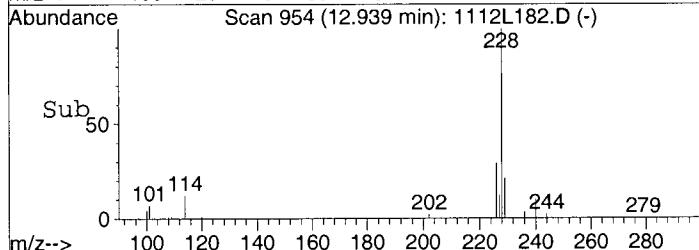
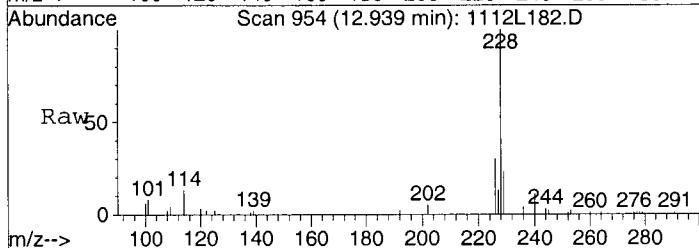
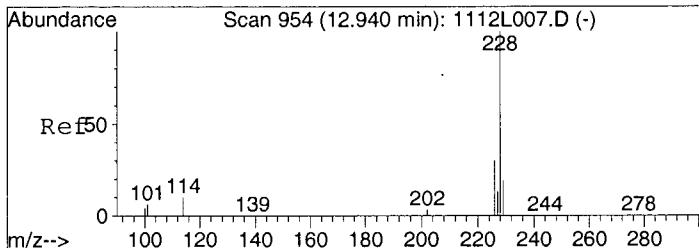


#14
Fluoranthene
Concen: 78.94 ppb
RT: 11.17 min Scan# 802
Delta R.T. -0.01 min
Lab File: 1112L182.D
Acq: 22 Nov 15 23:56

Tgt Ion:202 Resp: 26376
Ion Ratio Lower Upper
202 100
101 12.5 6.4 11.8#
100 9.2 4.8 8.8#



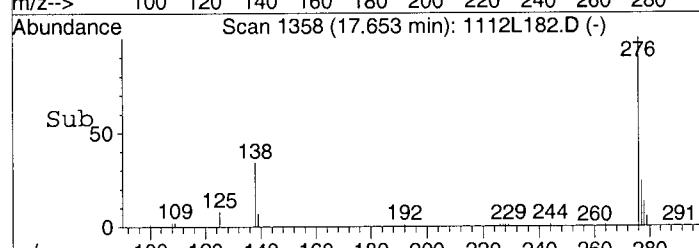
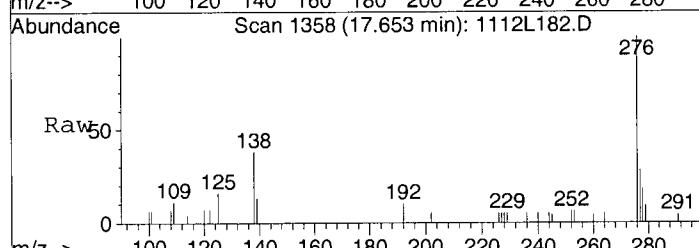
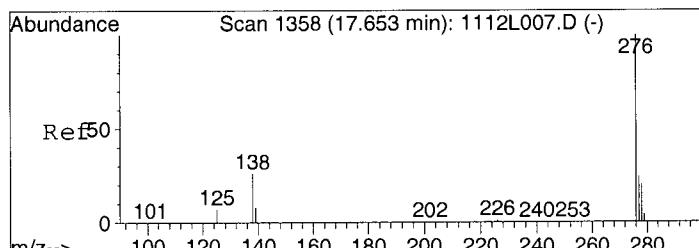
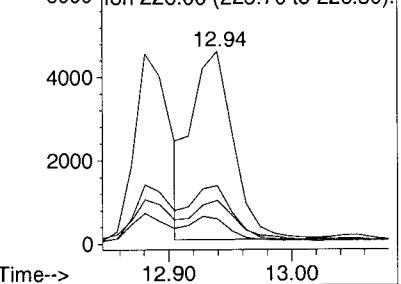




#19
Chrysene
Concen: 34.82 ppb
RT: 12.94 min Scan# 954
Delta R.T. -0.00 min
Lab File: 1112L182.D
Acq: 22 Nov 15 23:56

Tgt Ion:228 Resp: 10666
Ion Ratio Lower Upper
228 100
114 11.9 7.9 14.7
229 20.8 13.6 25.2
226 29.0 20.4 37.8

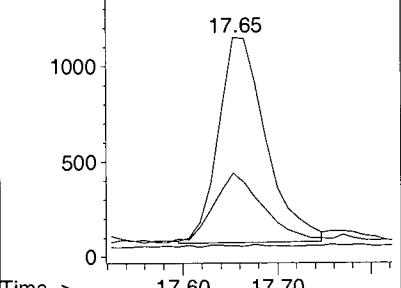
Abundance ion 228.00 (227.70 to 228.30):
Ion 114.00 (113.70 to 114.30):
Ion 229.00 (228.70 to 229.30):
Ion 226.00 (225.70 to 226.30):

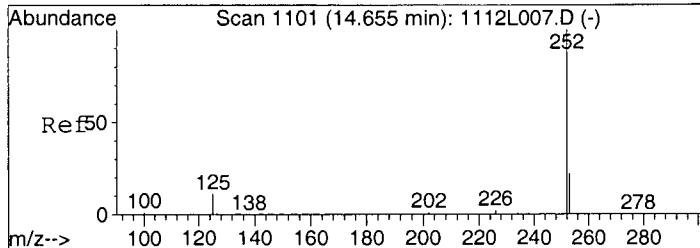


#20
Indeno (1, 2, 3-cd) pyrene
Concen: 12.24 ppb
RT: 17.65 min Scan# 1358
Delta R.T. -0.00 min
Lab File: 1112L182.D
Acq: 22 Nov 15 23:56

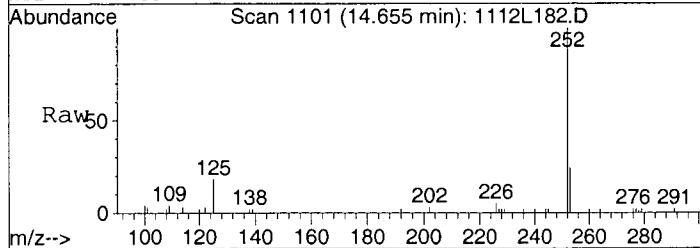
Tgt Ion:276 Resp: 3784
Ion Ratio Lower Upper
276 100
138 32.5 17.9 33.3
227 0.4 0.1 0.1#

Abundance ion 276.00 (275.70 to 276.30):
Ion 138.00 (137.70 to 138.30):
Ion 227.00 (226.70 to 227.30):

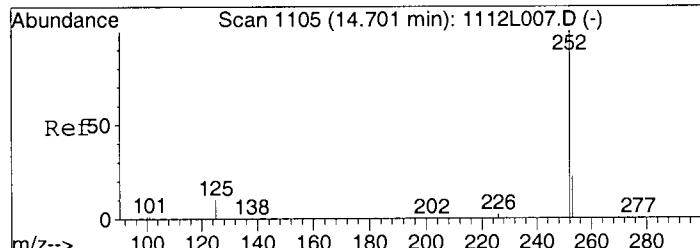
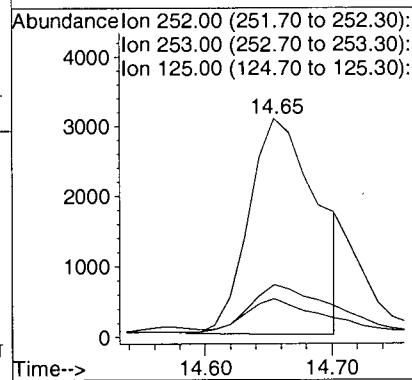
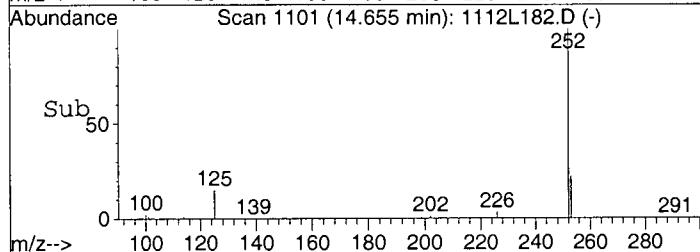




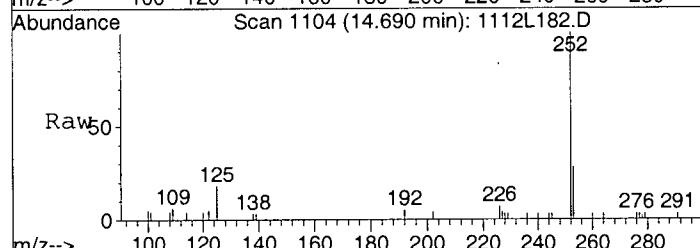
#22
 Benzo (b) fluoranthene
 Concen: 36.34 ppb m
 RT: 14.65 min Scan# 1101
 Delta R.T. 0.00 min
 Lab File: 1112L182.D
 Acq: 22 Nov 15 23:56



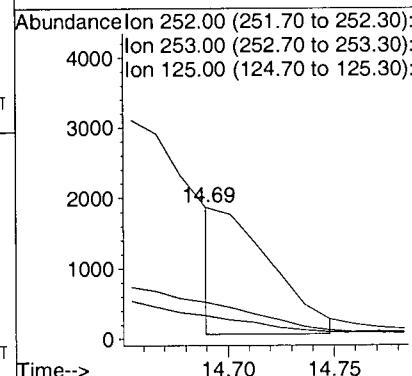
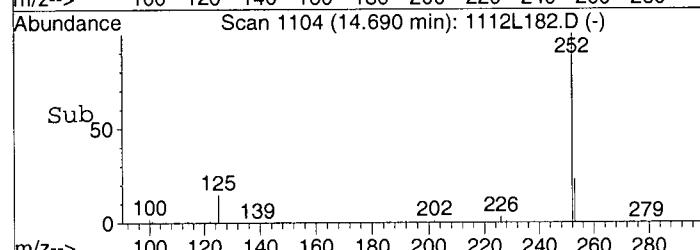
Tgt Ion:252 Resp: 11431
 Ion Ratio Lower Upper
 252 100
 253 23.8 15.1 28.1
 125 17.6 7.6 14.0#

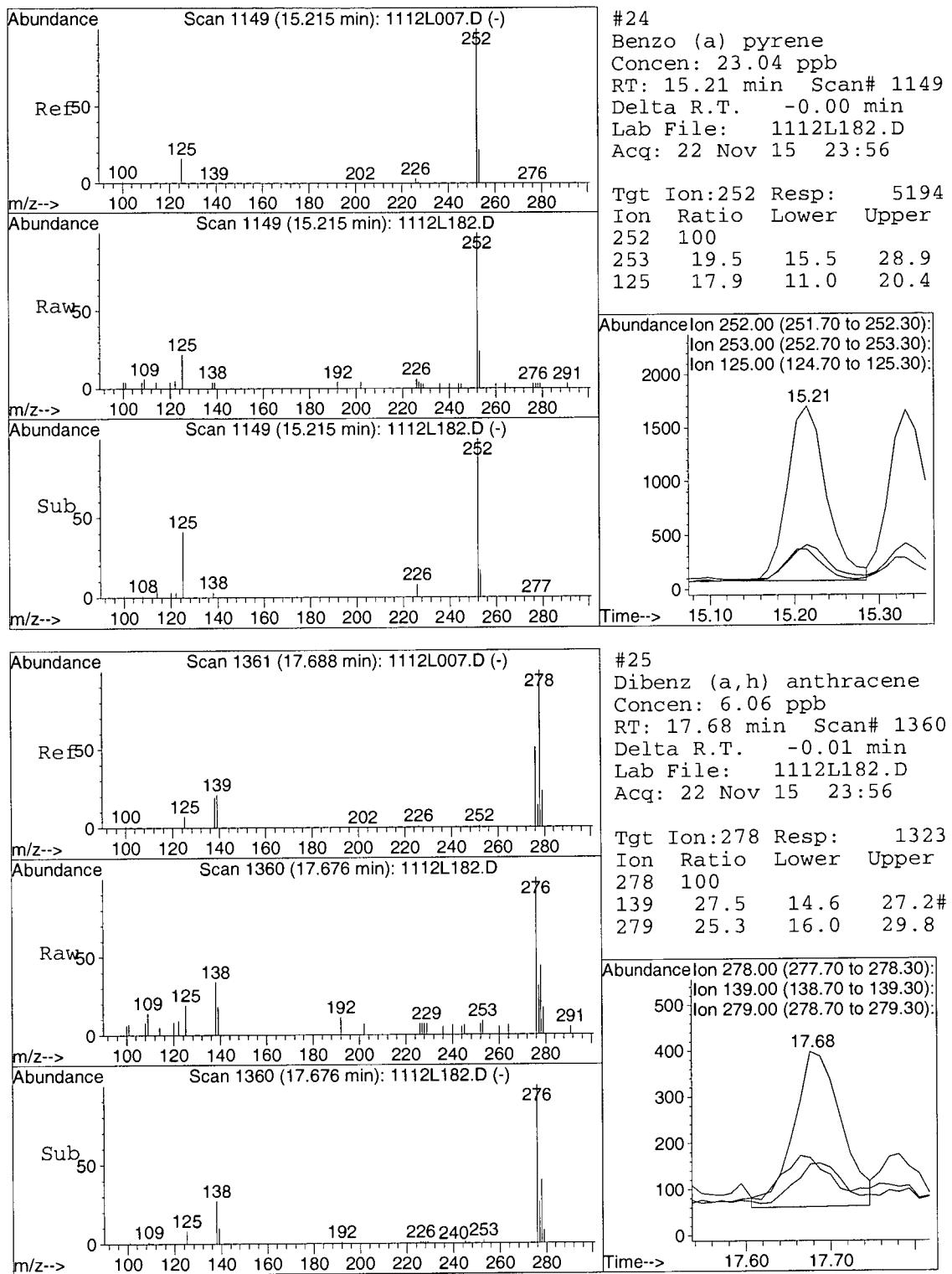


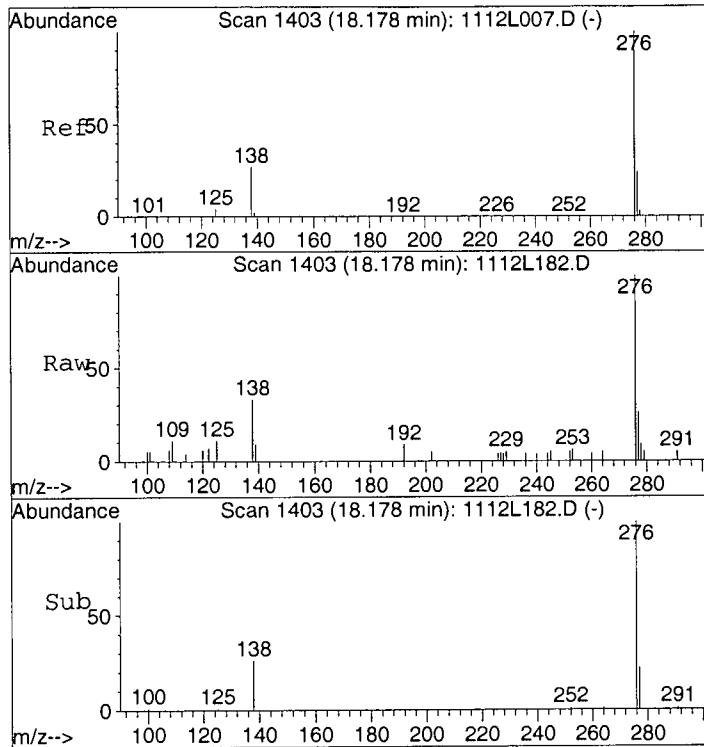
#23
 Benzo (k) fluoranthene
 Concen: 2.26 ppb m
 RT: 14.69 min Scan# 1104
 Delta R.T. -0.01 min
 Lab File: 1112L182.D
 Acq: 22 Nov 15 23:56



Tgt Ion:252 Resp: 3172
 Ion Ratio Lower Upper
 252 100
 253 28.1 15.4 28.6
 125 17.9 8.3 15.5#

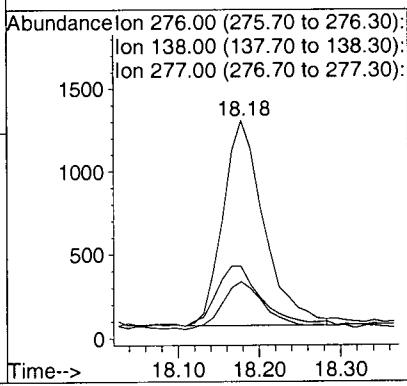






#26
 Benzo (g,h,i) perylene
 Concen: 18.67 ppb
 RT: 18.18 min Scan# 1403
 Delta R.T. -0.00 min
 Lab File: 1112L182.D
 Acq: 22 Nov 15 23:56

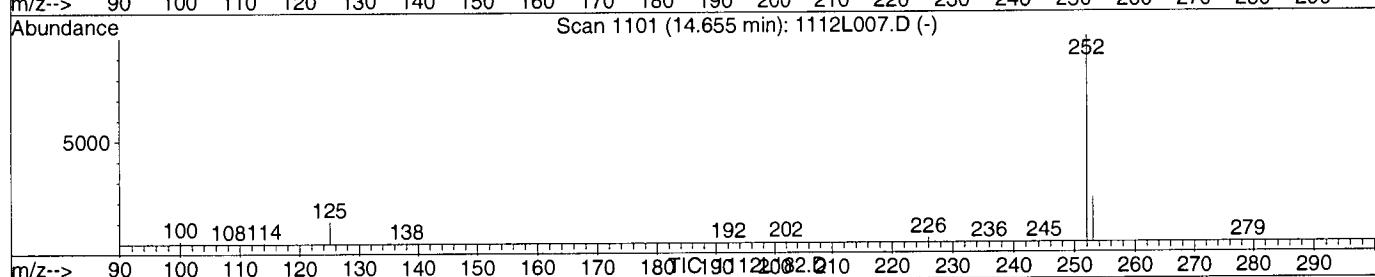
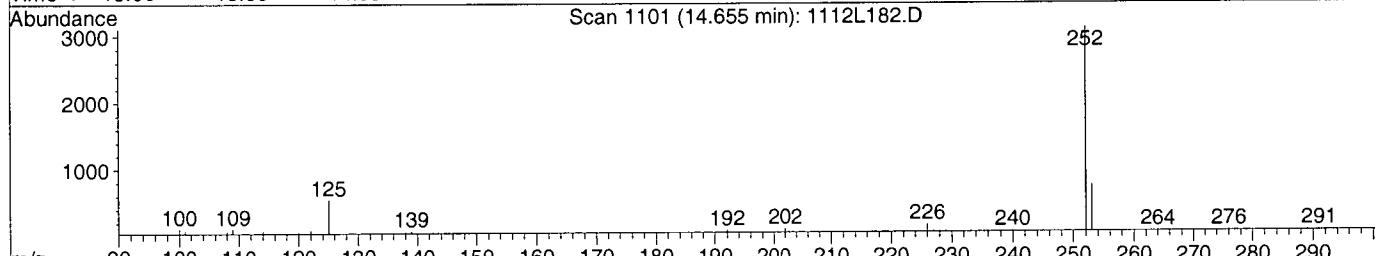
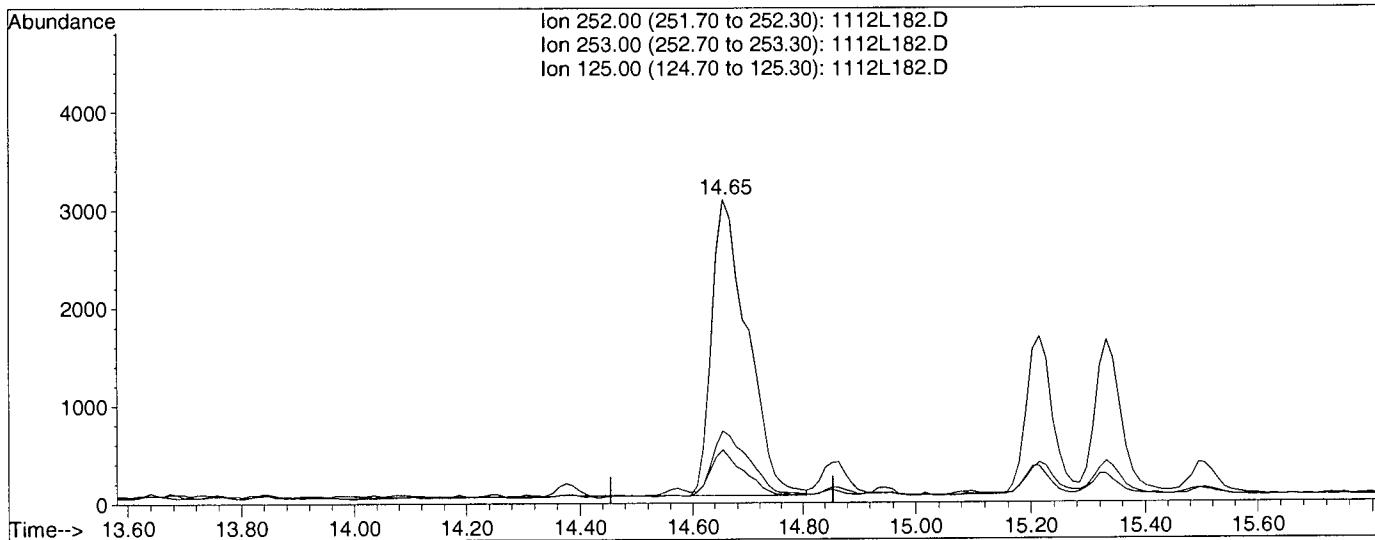
Tgt Ion: 276 Resp: 4363
 Ion Ratio Lower Upper
 276 100
 138 28.8 18.6 34.6
 277 23.1 16.6 30.8



Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L182.D Vial: 82
 Acq On : 22 Nov 15 23:56 Operator: MA
 Sample : AZ24400S02 1/30.08G Inst : Linus
 Misc : soil Multiplr: 33.24
 Quant Time: Nov 24 8:37 2015 Quant Results File: temp.res

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Multiple Level Calibration



(22) Benzo (b) fluoranthene (TM)

14.65min 43.6690ppb

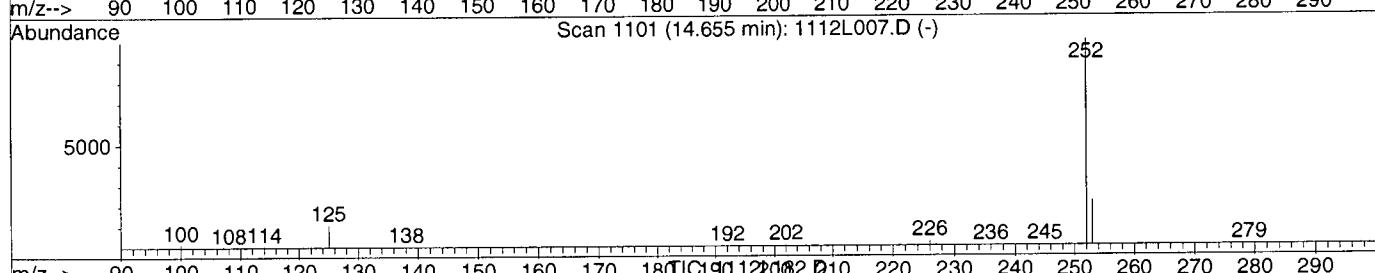
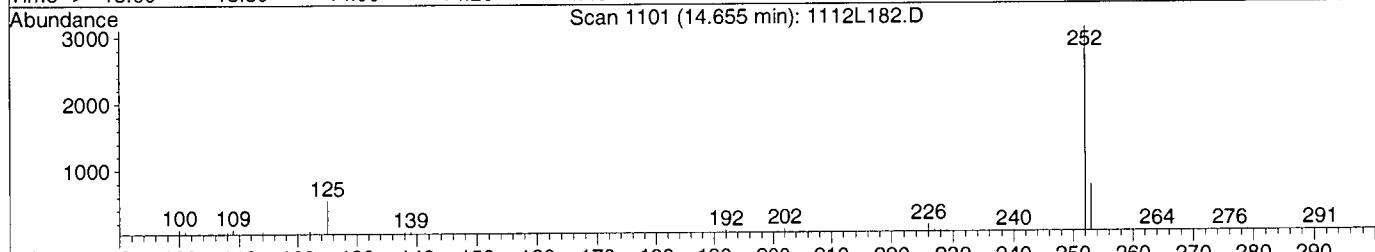
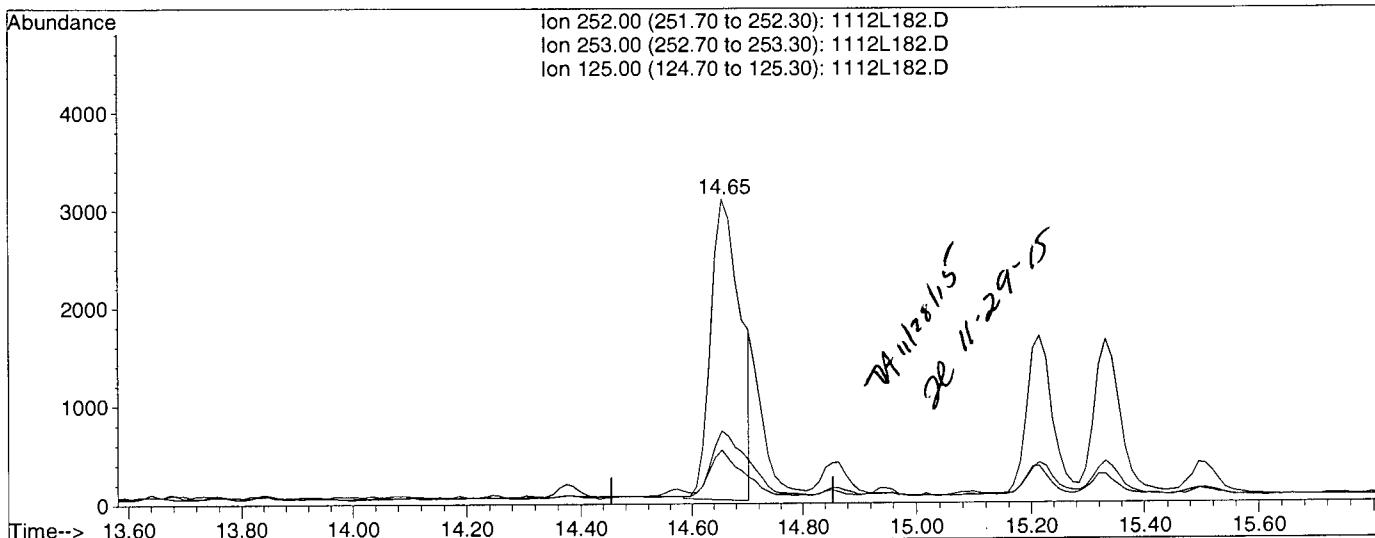
response 13469

Ion	Exp%	Act%
252.00	100	100
253.00	21.60	21.46
125.00	10.80	15.67#
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L182.D Vial: 82
 Acq On : 22 Nov 15 23:56 Operator: MA
 Sample : AZ24400S02 1/30.08G Inst : Linus
 Misc : soil Multiplr: 33.24
 Quant Time: Nov 24 11:37 2015 Quant Results File: temp.res

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Multiple Level Calibration



(22) Benzo (b) fluoranthene (TM)

14.65min 36.3412ppb m

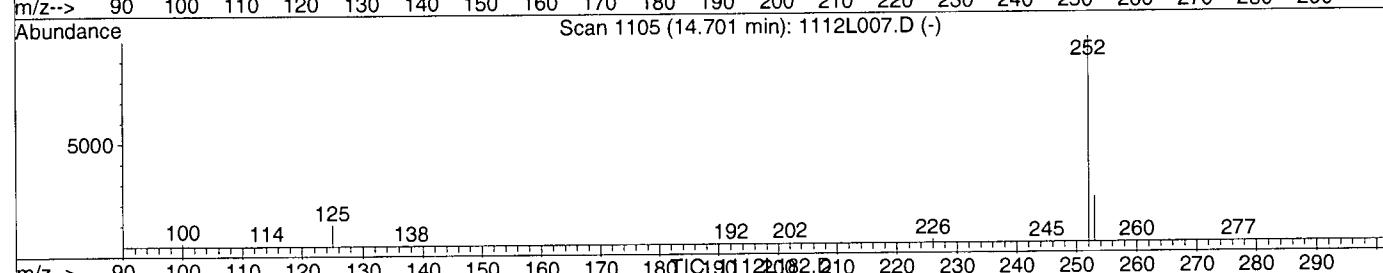
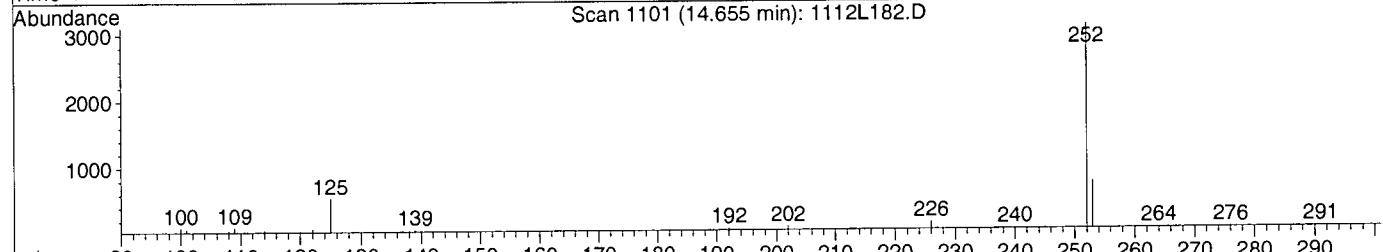
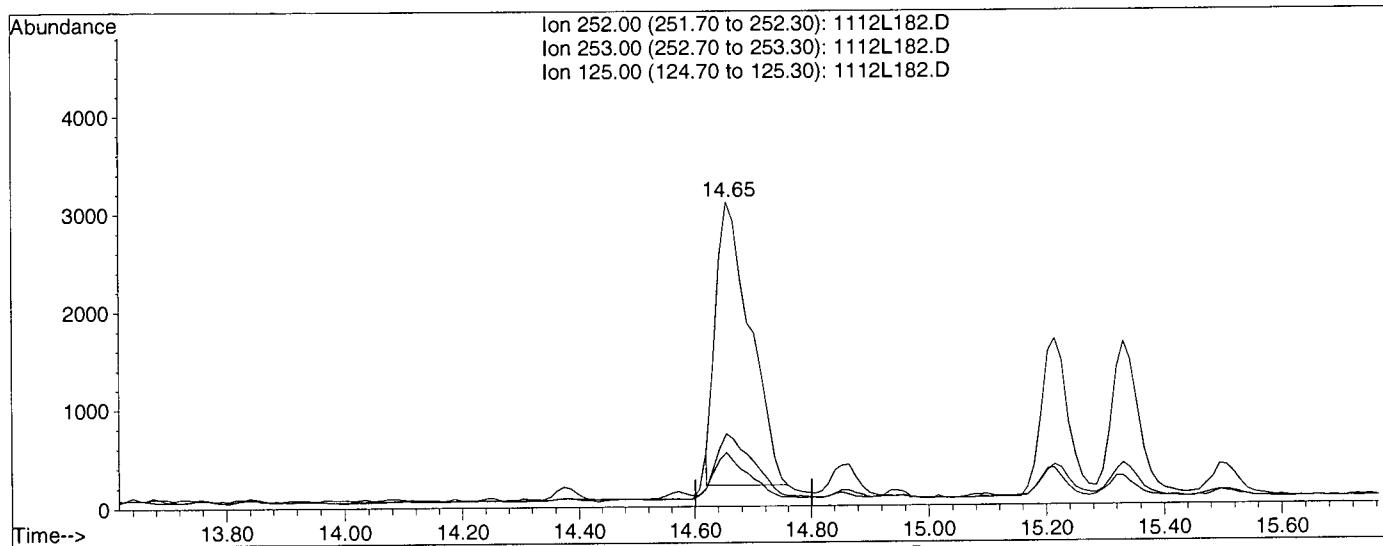
response 11431

Ion	Exp%	Act%
252.00	100	100
253.00	21.60	23.82
125.00	10.80	17.58#
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L182.D Vial: 82
 Acq On : 22 Nov 15 23:56 Operator: MA
 Sample : AZ24400S02 1/30.08G Inst : Linus
 Misc : soil Multiplr: 33.24
 Quant Time: Nov 24 11:37 2015 Quant Results File: temp.res

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Multiple Level Calibration



(23) Benzo (k) fluoranthene (TM)

14.65min 41.5588ppb

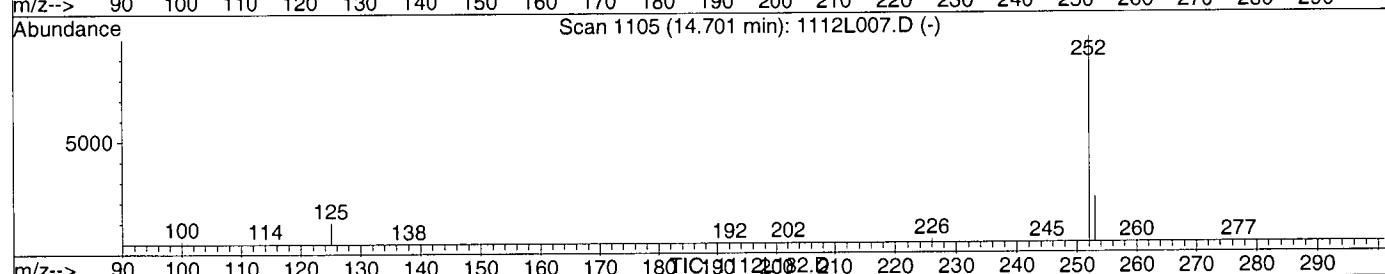
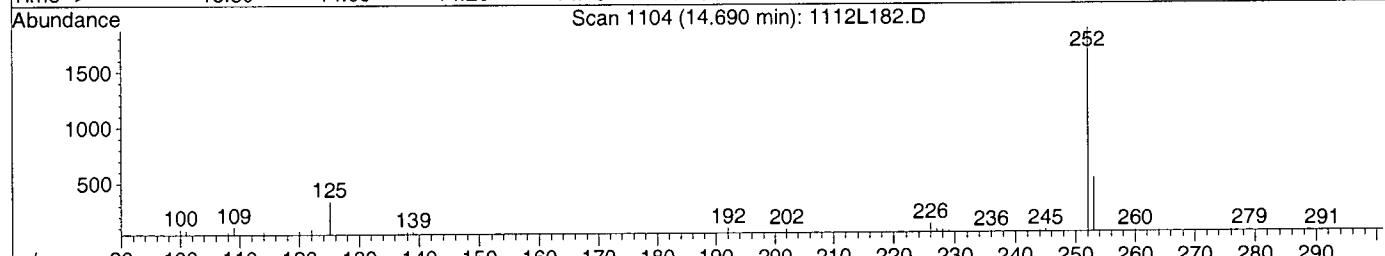
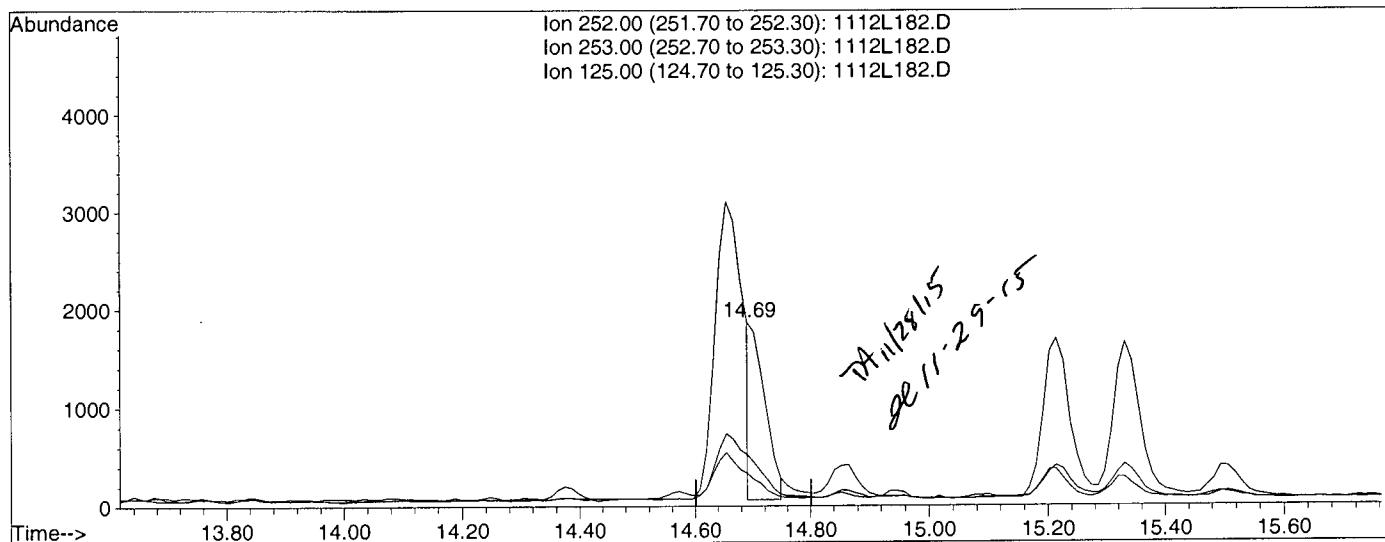
response 11680

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.05
125.00	11.90	15.84#
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L182.D Vial: 82
 Acq On : 22 Nov 15 23:56 Operator: MA
 Sample : AZ24400S02 1/30.08G Inst : Linus
 Misc : soil Multiplr: 33.24
 Quant Time: Nov 24 11:37 2015 Quant Results File: temp.res

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Multiple Level Calibration



(23) Benzo (k) fluoranthene (TM)

14.69min 2.2571ppb m

response 3172

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	28.14
125.00	11.90	17.94#
0.00	0.00	0.00

EPA 8270D LL SOILS

Tetra Tech
 5700 Lake Wright Dr, Ste 309
 Norfolk, VA 23502

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Attn: Ed Corack
 Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS53-0006
 Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24401
 QCG: #SIMDD-151117A-202551

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 18.6 Percent Moisture.)								
8270D-LL	2-METHYLNAPHTHALENE	0.0021 U	0.006	0.0021	0.0011	mg/kg	11/17/15	11/23/15
8270D-LL	ACENAPHTHENE	0.0021 U	0.006	0.0021	0.0012	mg/kg	11/17/15	11/23/15
8270D-LL	ACENAPHTHYLENE	0.0021 U	0.006	0.0021	0.0011	mg/kg	11/17/15	11/23/15
8270D-LL	ANTHRACENE	0.0021 U	0.006	0.0021	0.0010	mg/kg	11/17/15	11/23/15
8270D-LL	BENZ (A) ANTHRACENE	0.0030 J	0.006	0.0021	0.0011	mg/kg	11/17/15	11/23/15
8270D-LL	BENZO (A) PYRENE	0.0027 J	0.006	0.0021	0.0011	mg/kg	11/17/15	11/23/15
8270D-LL	BENZO (B) FLUORANTHENE	0.0021 U	0.006	0.0021	0.0014	mg/kg	11/17/15	11/23/15
8270D-LL	BENZO (G,H,I) PERYLENE	0.0090	0.006	0.0021	0.0016	mg/kg	11/17/15	11/23/15
8270D-LL	BENZO (K) FLUORANTHENE	0.0021 U	0.006	0.0021	0.0012	mg/kg	11/17/15	11/23/15
8270D-LL	CHRYSENE	0.0028 J	0.006	0.0021	0.0010	mg/kg	11/17/15	11/23/15
8270D-LL	DIBENZ (A,H) ANTHRACENE	0.0023 J	0.006	0.0021	0.0011	mg/kg	11/17/15	11/23/15
8270D-LL	FLUORANTHENE	0.0039 J	0.006	0.0021	0.0015	mg/kg	11/17/15	11/23/15
8270D-LL	FLUORENE	0.0021 U	0.006	0.0021	0.0012	mg/kg	11/17/15	11/23/15
8270D-LL	INDENO (1,2,3-CD) PYRENE	0.0042 J	0.006	0.0021	0.0011	mg/kg	11/17/15	11/23/15
8270D-LL	NAPHTHALENE	0.0021 U	0.006	0.0021	0.0011	mg/kg	11/17/15	11/23/15
8270D-LL	PHENANTHRENE	0.0018 J	0.006	0.0021	0.0014	mg/kg	11/17/15	11/23/15
8270D-LL	PYRENE	0.0035 J	0.006	0.0021	0.0015	mg/kg	11/17/15	11/23/15
8270D-LL	SURROGATE: 2-FLUORBIPHENYL (S)	71.2	45-105			%	11/17/15	11/23/15
8270D-LL	SURROGATE: NITROBENZENE-D5 (S)	89.6	35-100			%	11/17/15	11/23/15
8270D-LL	SURROGATE: TERPHENYL-D14 (S)	80.1	30-125			%	11/17/15	11/23/15

J = Estimated value.

Quant Method: P1112.M
 Run #: 1112L185
 Instrument: Linus
 Sequence: L151112
 Dilution Factor: 1
 Initials: DA

Printed: 11/25/2015 8:52:07 AM
 IPPL-F1-SC-MCRes/MCQL-REG MDLs-DO

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L185.D Vial: 85
 Acq On : 23 Nov 15 1:19 Operator: MA
 Sample : AZ24401S03 1/30.30G Inst : Linus
 Misc : soil Multiplr: 33.00

Quant Time: Nov 24 11:45 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	5.97	136	19892	2.50	ppb	0.00
6) Acenaphthene-D10(IS)	8.01	164	9466	2.50	ppb	0.00
11) Phenanthrene-D10(IS)	9.75	188	14920	2.50	ppb	0.00
15) Chrysene-D12(IS)	12.90	240	19601	2.50	ppb	0.00
21) Perylene-D12(IS)	15.46	264	9806	2.50	ppb	0.01

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	5.15	82	3440	73.95	ppb	0.02
Spiked Amount	82.508		Recovery	=	89.623%	
7) Surrogate Recovery (FBP)	7.23	172	8701	58.75	ppb	0.00
Spiked Amount	82.508		Recovery	=	71.209%	
17) Surrogate Recovery (TPH)	11.61	244	12287	66.12	ppb	-0.01
Spiked Amount	82.508		Recovery	=	80.135%	

Target Compounds

					Qvalue
4) 2-Methylnaphthalene	6.81	142	30	-4.11	ppb 100
12) Phenanthrene	9.79	178	328	1.43	ppb # 88
14) Fluoranthene	11.18	202	1040	3.20	ppb # 88
16) Pyrene	11.45	202	976	2.83	ppb 97
18) Benz (a) anthracene	12.89	228	747	2.43	ppb # 78
19) Chrysene	12.94	228	696	2.29	ppb # 96
20) Indeno (1,2,3-cd) pyrene	17.68	276	1061	3.45	ppb # 97
24) Benzo (a) pyrene	15.23	252	474	2.23	ppb 96
25) Dibenz (a,h) anthracene	17.71	278	384	1.86	ppb 88
26) Benzo (g,h,i) perylene	18.20	276	1606	7.29	ppb 98

Quantitation Report

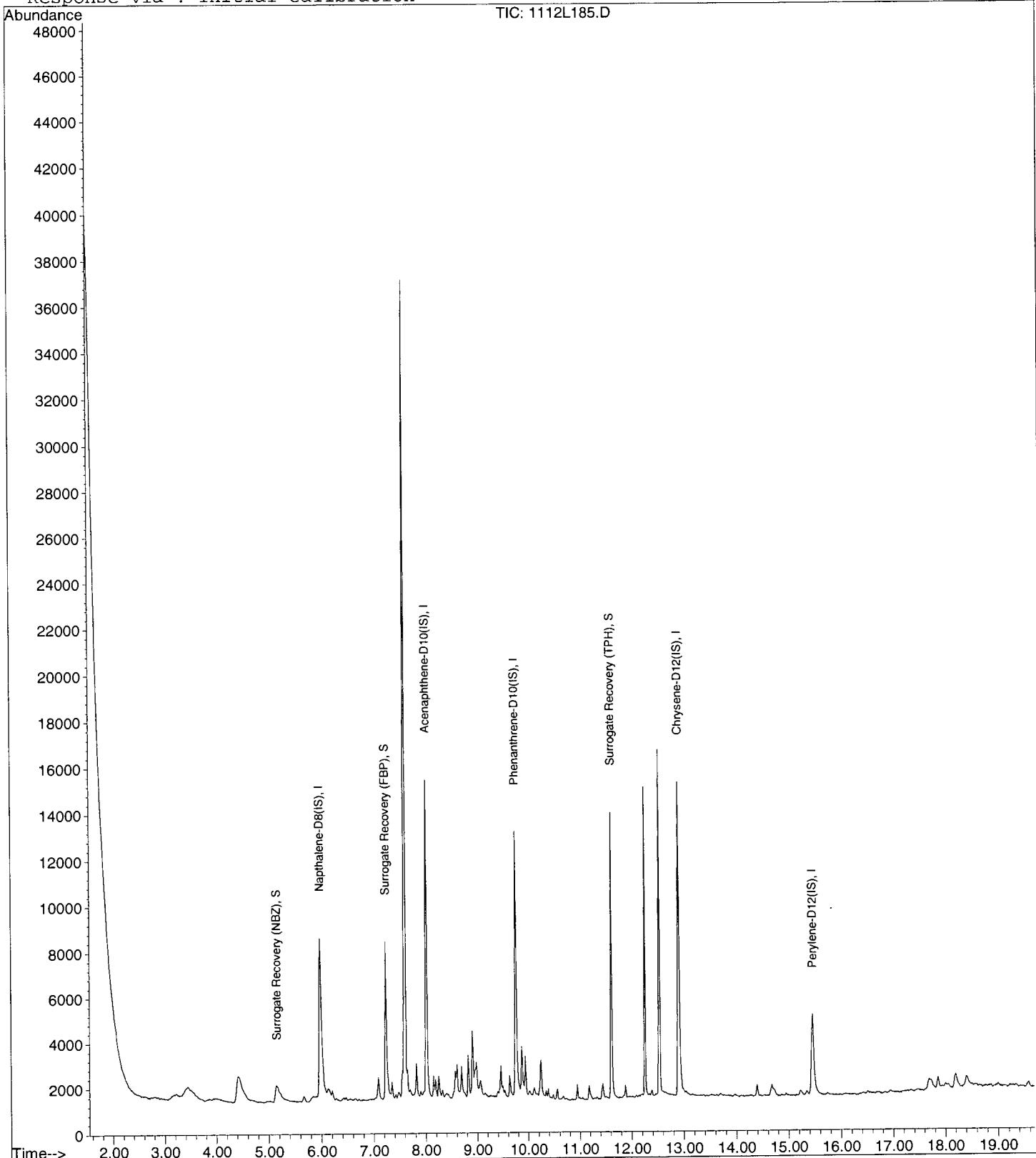
Data File : M:\LINUS\DATA\L151112\1112L185.D
Acq On : 23 Nov 15 1:19
Sample : AZ24401S03 1/30.30G
Misc : soil

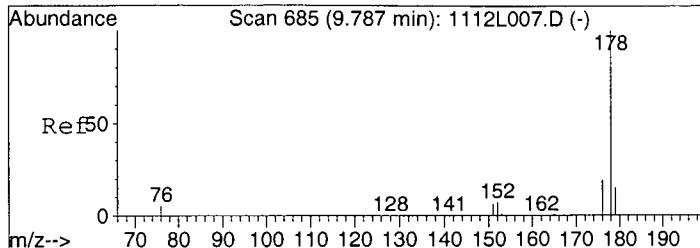
Vial: 85
Operator: MA
Inst : Linus
Multiplr: 33.00

Quant Time: Nov 24 11:45 2015

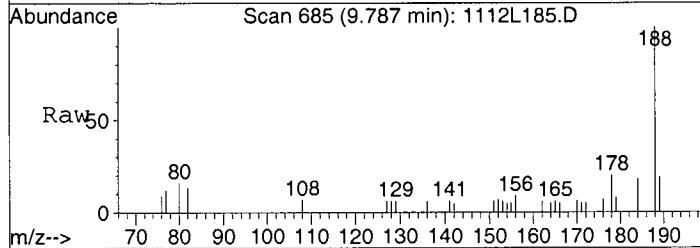
Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Nov 12 15:22:39 2015
Response via : Initial Calibration

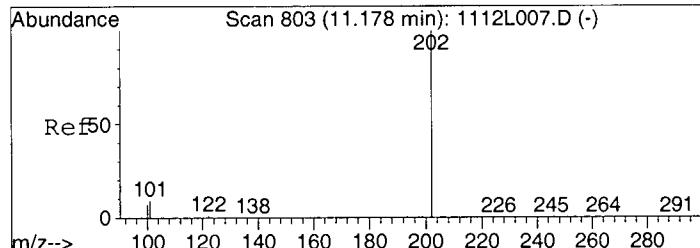
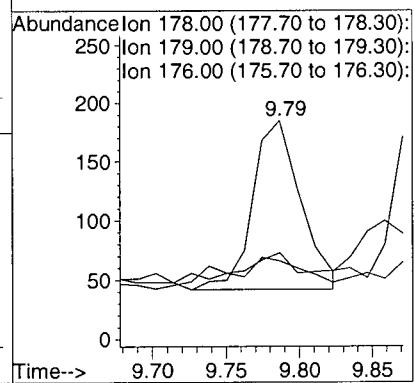
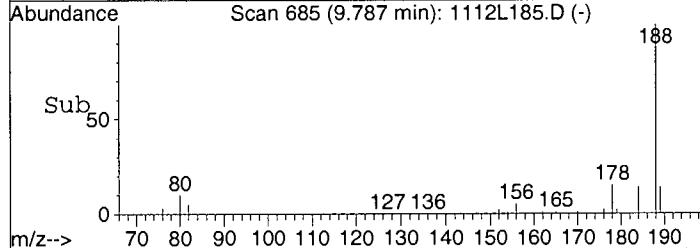




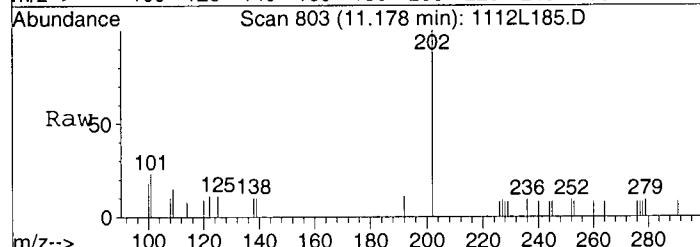
#12
Phenanthrene
Concen: 1.43 ppb
RT: 9.79 min Scan# 685
Delta R.T. -0.00 min
Lab File: 1112L185.D
Acq: 23 Nov 15 1:19



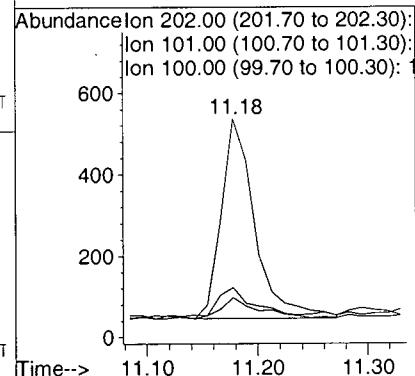
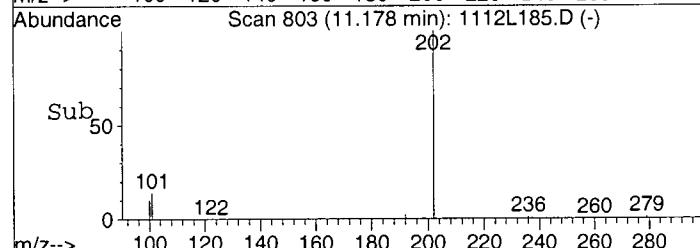
Tgt Ion:178 Resp: 328
Ion Ratio Lower Upper
178 100
179 11.9 10.9 20.2
176 12.6 13.4 24.8#

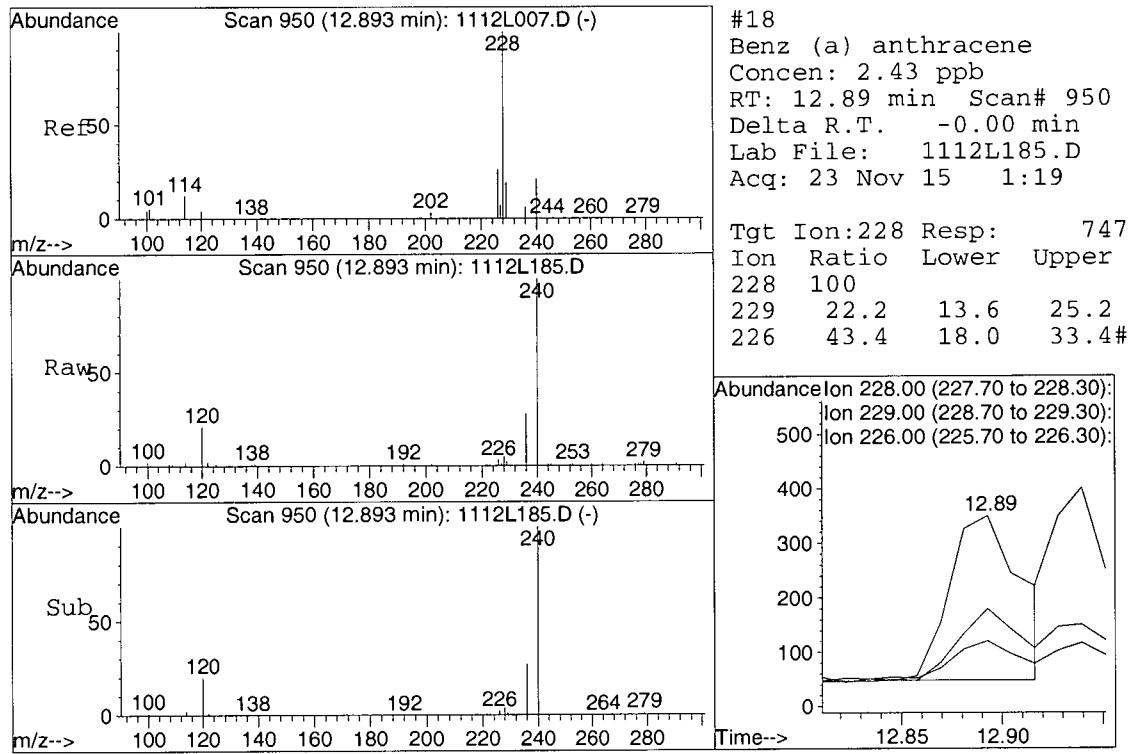
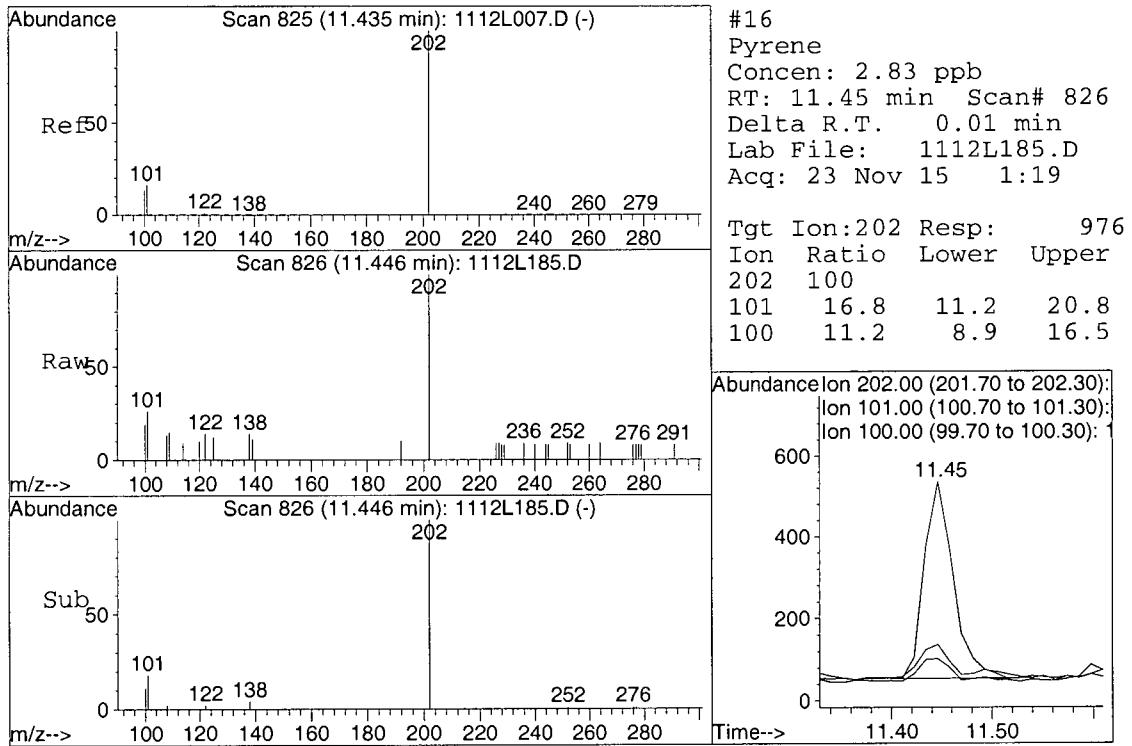


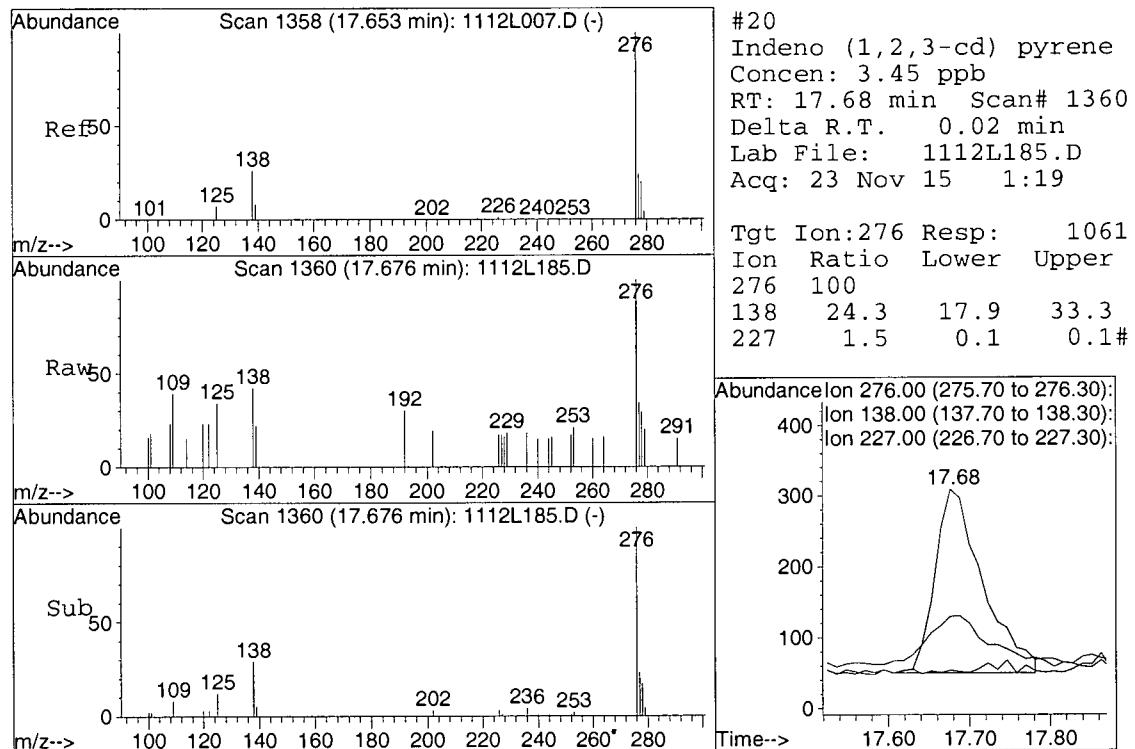
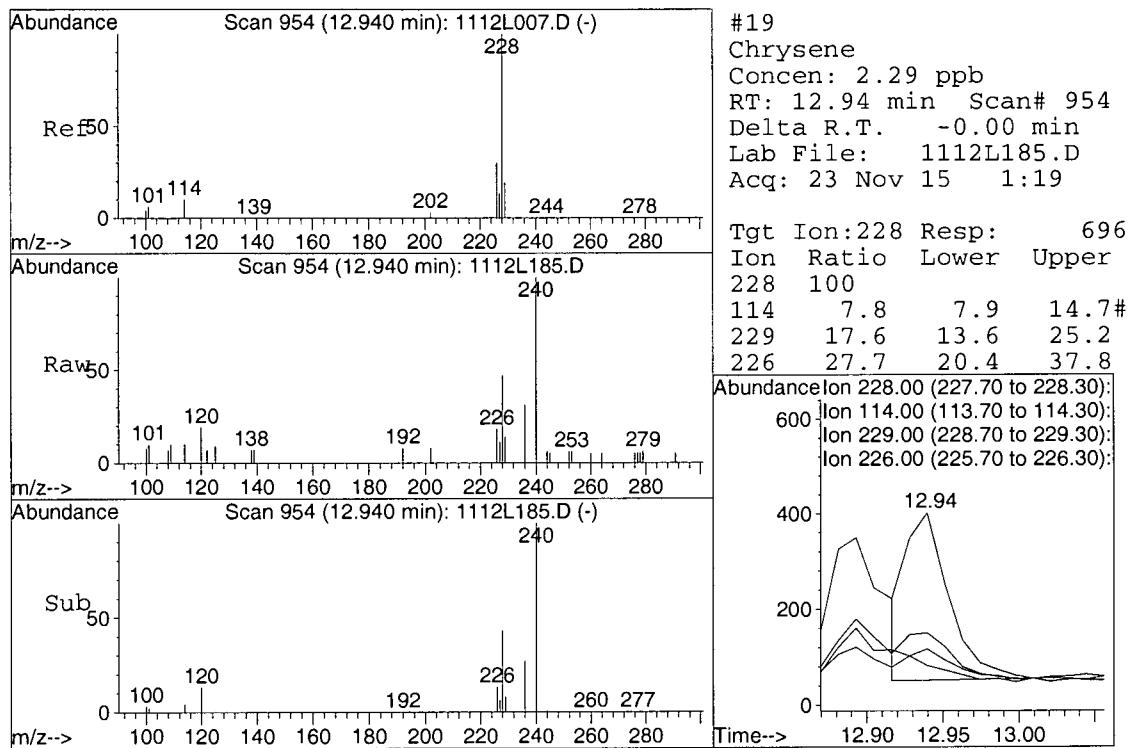
#14
Fluoranthene
Concen: 3.20 ppb
RT: 11.18 min Scan# 803
Delta R.T. -0.00 min
Lab File: 1112L185.D
Acq: 23 Nov 15 1:19

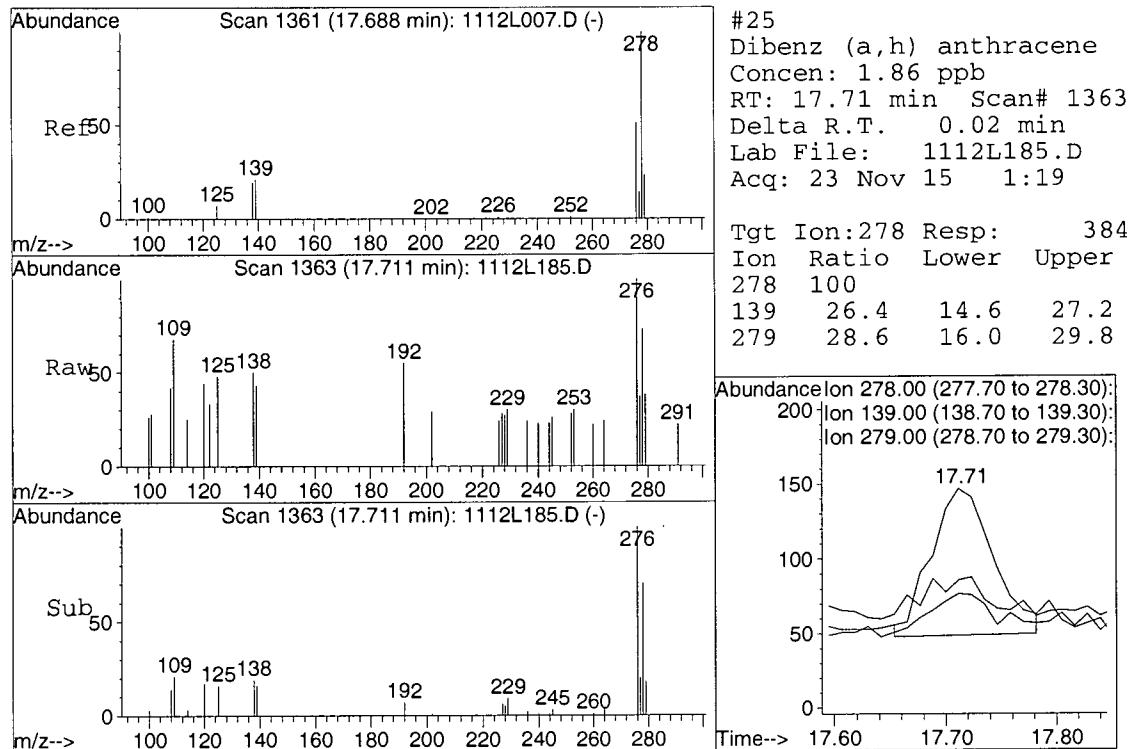
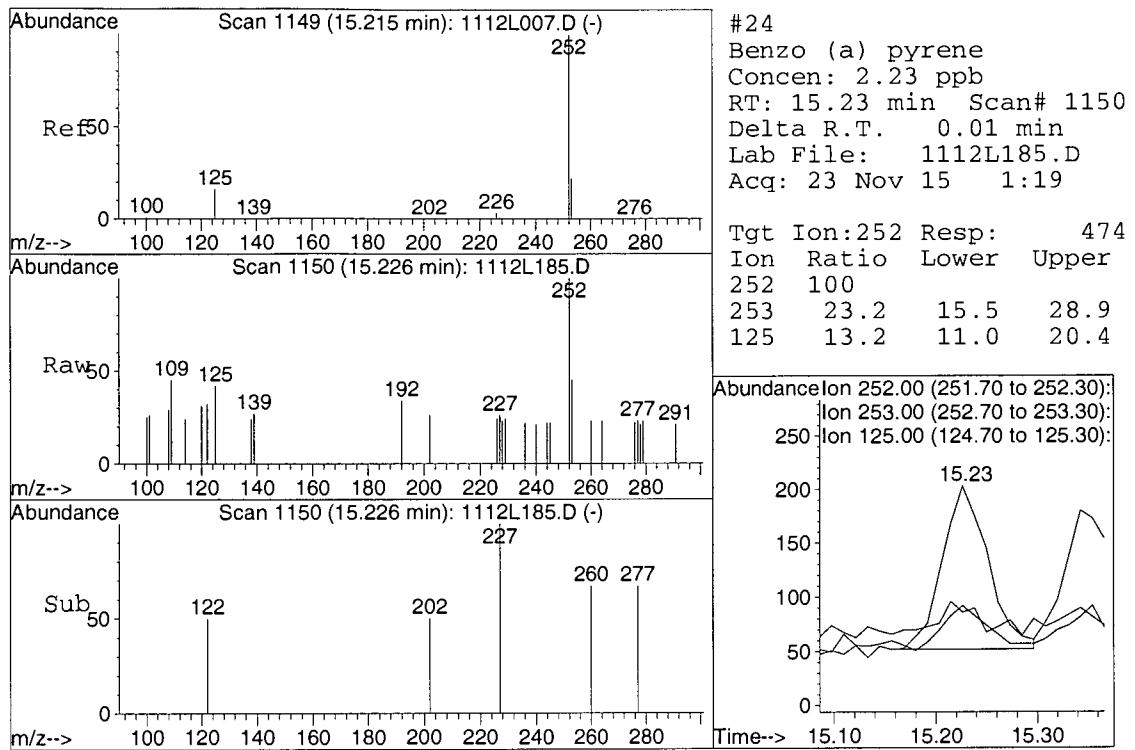


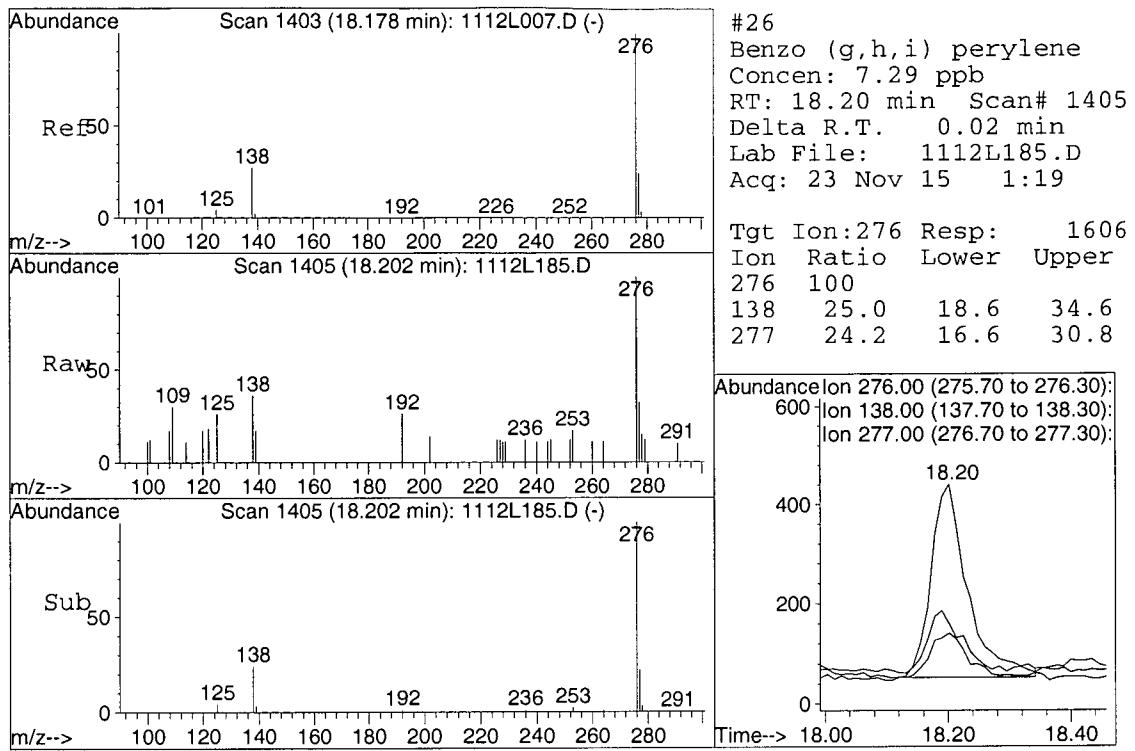
Tgt Ion:202 Resp: 1040
Ion Ratio Lower Upper
202 100
101 14.1 6.4 11.8#
100 10.4 4.8 8.8#











EPA METHOD 8270D
Polynuclear Aromatic Hydrocarbons
Calibration Data

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: _____
Case No: _____ Initial Cal. Date: 11/12/15
Matrix: _____ Instrument: Linus Initials: MA _____

	Compound	0.1	0.2	0.5	1	5	10	50	100		Avg	%RSD		
1	I Naphthalene-D8(IS)													
2	SL Surrogate Recovery (NBZ)			0.1529	0.1921	0.2558	0.3046	0.3625	0.3710		0.27	33	SL	1.000
3	TM Naphthalene	1.045	1.037	0.9471	1.006	1.244	1.233	1.218	1.170		1.1	10	TM	
4	TML 2-Methylnaphthalene	0.6226	0.5041	0.5261	0.5512	0.7320	0.7679	0.7581	0.7279		0.65	17	TML	1.000
5	TM 1-Methylnaphthalene	0.6853	0.7175	0.6555	0.6815	0.8463	0.8427	0.7793	0.7283		0.74	9.9	TM	
6	I Acenaphthene-D10(IS)													
7	S Surrogate Recovery (FBP)	1.226	1.136	1.141	1.175	1.411	1.422	1.449	1.367		1.3	10	S	
8	TM Acenaphthylene	2.110	1.936	1.814	1.727	2.216	2.193	2.275	2.144		2.1	9.8	TM	
9	*TM Acenaphthene	1.197	1.142	1.134	1.086	1.394	1.315	1.299	1.231		1.2	8.6	*TM	
10	TM Fluorene	1.414	1.360	1.334	1.337	1.677	1.639	1.619	1.519		1.5	9.7	TM	
11	I Phenanthrene-D10(IS)													
12	TM Phenanthrene	1.242	1.244	1.117	1.101	1.422	1.394	1.339	1.266		1.3	9.3	TM	
13	TM Anthracene	1.229	1.005	1.056	1.018	1.249	1.312	1.288	1.174		1.2	11	TM	
14	*TM Fluoranthene	1.741	1.705	1.594	1.595	1.973	1.987	1.945	1.846		1.8	9.0	*TM	
15	I Chrysene-D12(IS)													
16	TM Pyrene	1.485	1.439	1.315	1.317	1.582	1.518	1.498	1.440		1.4	6.5	TM	
17	S Surrogate Recovery (TPH)	0.7948	0.7309	0.7262	0.7197	0.8525	0.8544	0.8159	0.7636		0.78	7.1	S	
18	TM Benz (a) anthracene	1.486	1.269	1.185	1.127	1.279	1.322	1.374	1.300		1.3	8.5	TM	
19	TM Chrysene	1.402	1.246	1.189	1.216	1.444	1.306	1.231	1.222		1.3	7.3	TM	
20	TM Indeno (1,2,3-cd) pyrene	1.370	1.227	1.180	1.142	1.381	1.342	1.366	1.341		1.3	7.4	TM	
21	I Perylene-D12(IS)													
22	TML Benzo (b) fluoranthene	2.192	1.573	1.709	1.735	2.293	2.410	2.230	2.203		2.0	16	TML	1.000
23	TML Benzo (k) fluoranthene	1.542	1.185	1.191	1.381	1.812	1.717	1.890	1.684		1.6	18	TML	0.997
24	*TM Benzo (a) pyrene	1.661	1.630	1.575	1.650	2.026	1.974	1.930	1.855		1.8	9.9	*TM	
25	TM Dibenz (a,h) anthracene	1.632	1.664	1.535	1.493	1.962	1.902	1.880	1.791		1.7	10	TM	
26	TM Benzo (g,h,i) perylene	1.928	1.834	1.636	1.707	2.033	1.958	1.906	1.827		1.9	7.1	TM	
27														
28														
29														
30														
31														
32														
33														
34														
35														

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L003.D Vial: 3
 Acq On : 12 Nov 15 11:05 Operator: MA
 Sample : 0.1ug/ml PAH 11/12/15 Inst : Linus
 Misc : Multiplr: 1.00

Quant Time: Nov 12 15:00 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:00:36 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8 (IS)	5.97	136	19956	2.50000	ppb	0.00
6) Acenaphthene-D10 (IS)	8.01	164	10379	2.50000	ppb	0.00
11) Phenanthrene-D10 (IS)	9.76	188	16541	2.50000	ppb	0.01
15) Chrysene-D12 (IS)	12.92	240	20289	2.50000	ppb	0.01
21) Perylene-D12 (IS)	15.46	264	11966	2.50000	ppb	0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.17	82	208	0.09089	ppb	0.04
Spiked Amount 2.500			Recovery =	3.640%		
7) Surrogate Recovery (FBP)	7.24	172	509	0.09304	ppb	0.01
Spiked Amount 2.500			Recovery =	3.720%		
17) Surrogate Recovery (TPH)	11.62	244	645	0.09846	ppb	0.00
Spiked Amount 2.500			Recovery =	3.920%		
Target Compounds						
3) Naphthalene	6.00	128	834	0.09005	ppb	97
4) 2-Methylnaphthalene	6.82	142	497	0.09562	ppb	93
5) 1-Methylnaphthalene	6.93	142	547	0.08410	ppb	100
8) Acenaphthylene	7.86	152	876	0.09956	ppb	95
9) Acenaphthene	8.05	154	497	0.09222	ppb	86
10) Fluorene	8.66	166	587	0.09425	ppb	95
12) Phenanthrene	9.79	178	822	0.10060	ppb	97
13) Anthracene	9.86	178	813	0.10052	ppb	98
14) Fluoranthene	11.19	202	1152	0.09139	ppb	# 89
16) Pyrene	11.45	202	1205	0.09437	ppb	96
18) Benz (a) anthracene	12.90	228	1206	0.11811	ppb	99
19) Chrysene	12.95	228	1138	0.09548	ppb	98
20) Indeno (1,2,3-cd) pyrene	17.69	276	1112	0.10634	ppb	# 98
22) Benzo (b) fluoranthene	14.68	252	1049	0.11228	ppb	# 95
23) Benzo (k) fluoranthene	14.72	252	738	0.09790	ppb	# 90
24) Benzo (a) pyrene	15.24	252	795	0.08754	ppb	92
25) Dibenz (a,h) anthracene	17.72	278	781	0.09360	ppb	95
26) Benzo (g,h,i) perylene	18.21	276	923	0.10433	ppb	88

Quantitation Report

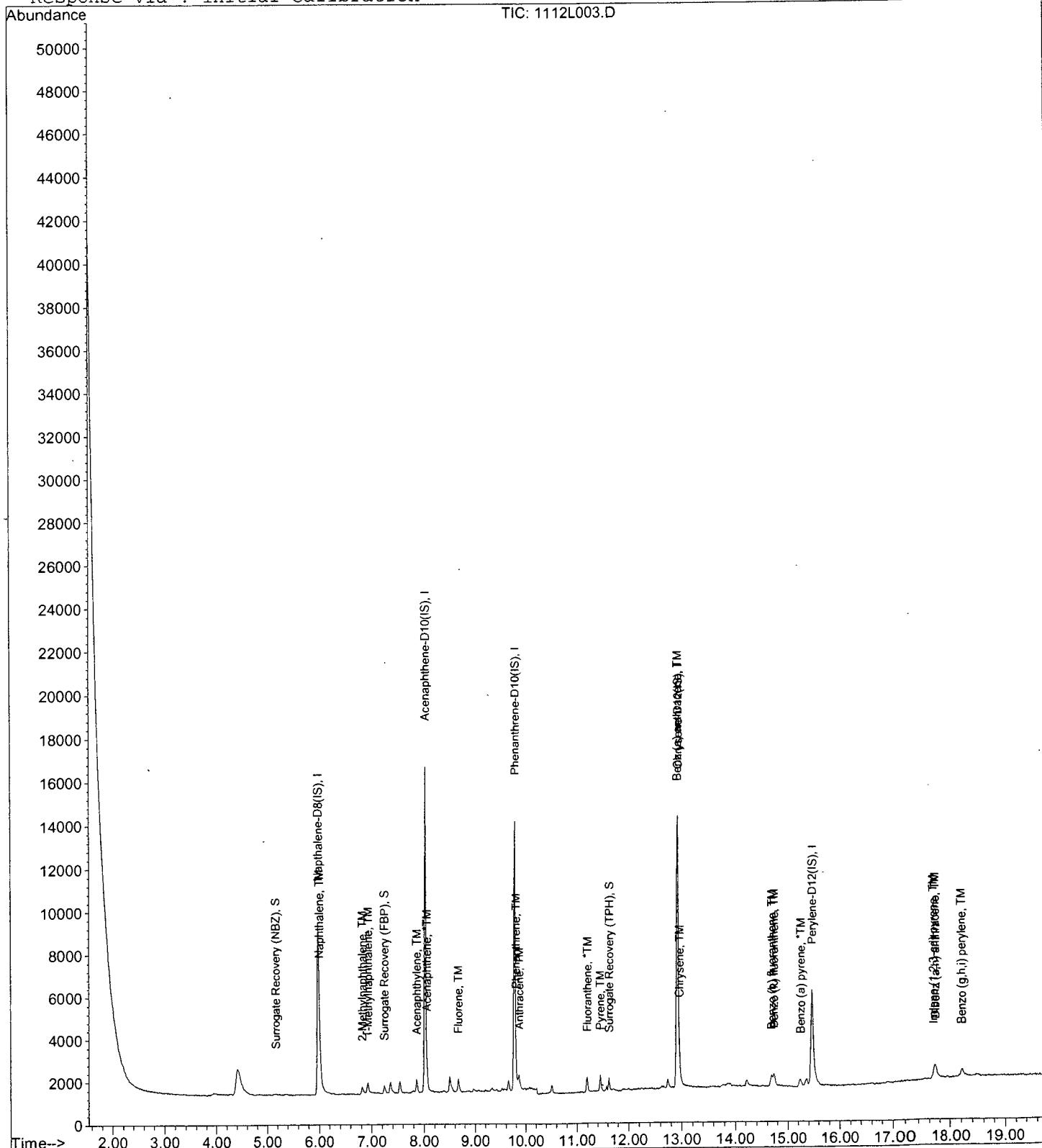
Data File : M:\LINUS\DATA\L151112\1112L003.D
 Acq On : 12 Nov 15 11:05
 Sample : 0.1ug/ml PAH 11/12/15
 Misc :

Vial: 3
 Operator: MA
 Inst : Linus
 Multiplr: 1.00

Quant Time: Nov 12 15:00 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L004.D Vial: 4
 Acq On : 12 Nov 15 11:32 Operator: MA
 Sample : 0.2ug/ml PAH 11/12/15 Inst : Linus
 Misc : Multiplr: 1.00

Quant Time: Nov 12 15:00 2015

Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:00:36 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-D8(IS)	5.97	136	19616	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	8.01	164	10080	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.76	188	16236	2.50000	ppb	0.01
15) Chrysene-D12(IS)	12.92	240	20128	2.50000	ppb	0.01
21) Perylene-D12(IS)	15.46	264	11861	2.50000	ppb	0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.15	82	202	0.08979	ppb	0.02
Spiked Amount 2.500			Recovery =	3.600%		
7) Surrogate Recovery (FBP)	7.24	172	916	0.17240	ppb	0.01
Spiked Amount 2.500			Recovery =	6.880%		
17) Surrogate Recovery (TPH)	11.62	244	1177	0.18111	ppb	0.00
Spiked Amount 2.500			Recovery =	7.240%		
Target Compounds						
3) Naphthalene	6.00	128	1628	0.17882	ppb	96
4) 2-Methylnaphthalene	6.82	142	791	0.15483	ppb	100
5) 1-Methylnaphthalene	6.93	142	1126	0.17613	ppb	97
8) Acenaphthylene	7.86	152	1561	0.18268	ppb	96
9) Acenaphthene	8.05	154	921	0.17597	ppb	98
10) Fluorene	8.68	166	1097	0.18136	ppb	93
12) Phenanthrene	9.79	178	1616	0.20148	ppb	99
13) Anthracene	9.86	178	1306	0.16451	ppb	98
14) Fluoranthene	11.19	202	2215	0.17901	ppb	96
16) Pyrene	11.46	202	2317	0.18291	ppb	94
18) Benz (a) anthracene	12.90	228	2043	0.20168	ppb	96
19) Chrysene	12.95	228	2007	0.16975	ppb	99
20) Indeno (1,2,3-cd) pyrene	17.70	276	1975	0.19038	ppb	# 94
22) Benzo (b) fluoranthene	14.68	252	1493	0.16122	ppb	99
23) Benzo (k) fluoranthene	14.72	252	1124	0.15042	ppb	97
24) Benzo (a) pyrene	15.23	252	1547	0.17185	ppb	99
25) Dibenz (a,h) anthracene	17.72	278	1579	0.19092	ppb	97
26) Benzo (g,h,i) perylene	18.21	276	1740	0.19841	ppb	92

(#) = qualifier out of range (m) = manual integration
 1112L004.D P1112.M Fri Nov 13 10:08:18 2015

Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L004.D
 Acq On : 12 Nov 15 11:32
 Sample : 0.2ug/ml PAH 11/12/15
 Misc :

Vial: 4
 Operator: MA
 Inst : Linus
 Multiplr: 1.00

Quant Time: Nov 12 15:00 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L005.D Vial: 5
 Acq On : 12 Nov 15 12:00 Operator: MA
 Sample : 0.5ug/ml PAH 11/12/15 Inst : Linus
 Misc :

Quant Time: Nov 12 15:22 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:21:55 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Napthalene-D8(IS)	5.97	136	19169	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	8.01	164	9751	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.76	188	15889	2.50000	ppb	0.01
15) Chrysene-D12(IS)	12.92	240	20194	2.50000	ppb	0.01
21) Perylene-D12(IS)	15.46	264	12075	2.50000	ppb	0.01

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	5.17	82	586	1.08631	ppb	0.04
Spiked Amount	2.500		Recovery	=	43.440%	
7) Surrogate Recovery (FBP)	7.24	172	2225	0.44193	ppb	0.01
Spiked Amount	2.500		Recovery	=	17.680%	
17) Surrogate Recovery (TPH)	11.62	244	2933	0.46418	ppb	0.00
Spiked Amount	2.500		Recovery	=	18.560%	

Target Compounds

					Qvalue
3) Naphthalene	6.00	128	3631	0.42563	ppb
4) 2-Methylnaphthalene	6.82	142	2017	0.22938	ppb
5) 1-Methylnaphthalene	6.93	142	2513	0.44168	ppb
8) Acenaphthylene	7.86	152	3538	0.44208	ppb
9) Acenaphthene	8.05	154	2212	0.46301	ppb
10) Fluorene	8.68	166	2602	0.44848	ppb
12) Phenanthrene	9.79	178	3551	0.44136	ppb
13) Anthracene	9.86	178	3356	0.45267	ppb
14) Fluoranthene	11.18	202	5064	0.44308	ppb
16) Pyrene	11.45	202	5310	0.45359	ppb
18) Benz (a) anthracene	12.90	228	4787	0.45839	ppb
19) Chrysene	12.95	228	4802	0.46374	ppb
20) Indeno (1,2,3-cd) pyrene	17.69	276	4766	0.45610	ppb
22) Benzo (b) fluoranthene	14.67	252	4127	0.24418	ppb
24) Benzo (a) pyrene	15.23	252	3803	0.44044	ppb
25) Dibenz (a,h) anthracene	17.71	278	3706	0.44289	ppb
26) Benzo (g,h,i) perylene	18.20	276	3952	0.44142	ppb

Quantitation Report

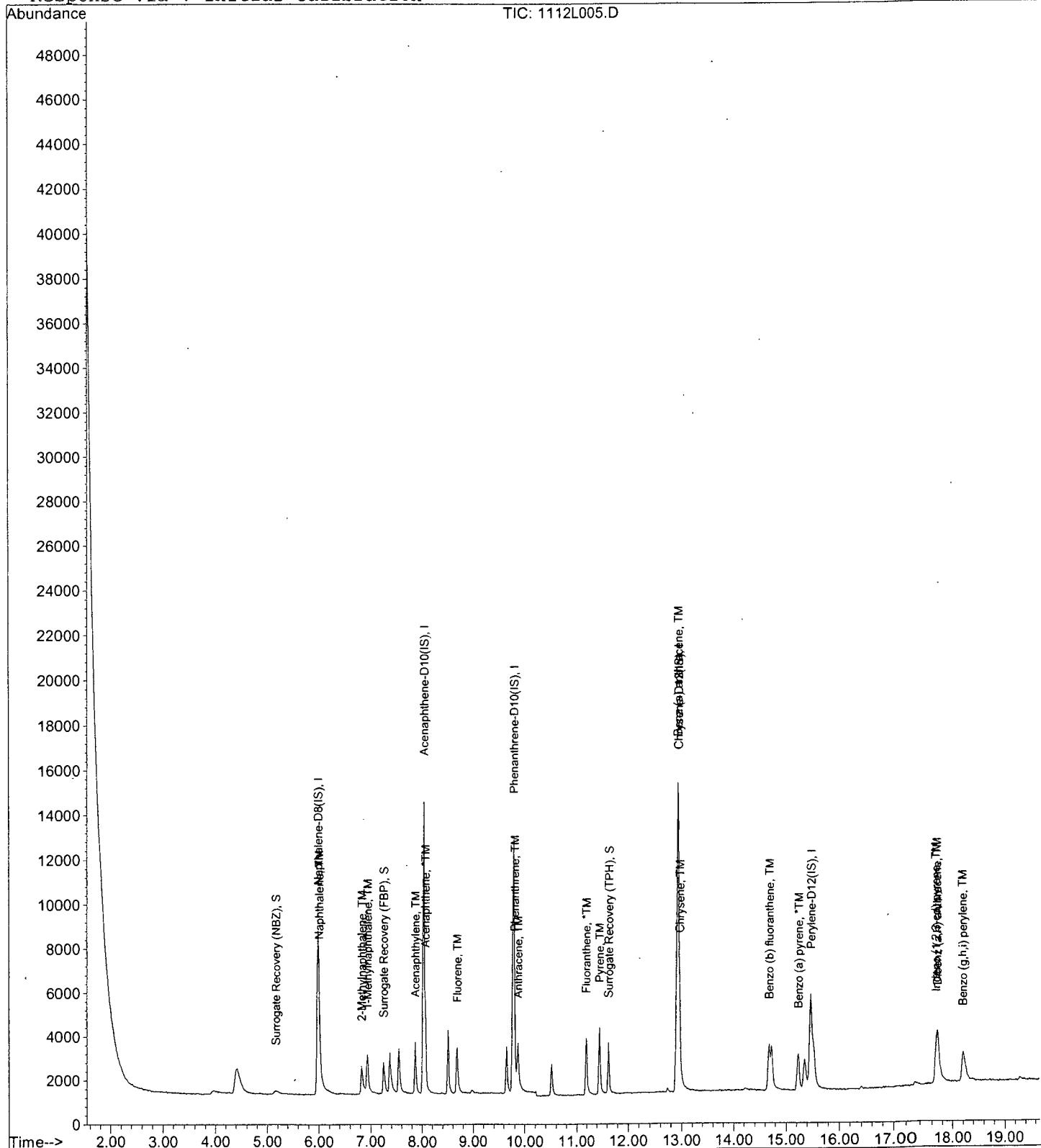
Data File : M:\LINUS\DATA\L151112\1112L005.D
 Acq On : 12 Nov 15 12:00
 Sample : 0.5ug/ml PAH 11/12/15
 Misc :

Vial: 5
 Operator: MA
 Inst : Linus
 Multiplr: 1.00

Quant Time: Nov 12 15:22 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L006.D Vial: 6
 Acq On : 12 Nov 15 12:28 Operator: MA
 Sample : 1.0ug/ml PAH 11/12/15 Inst : Linus
 Misc : Multiplr: 1.00

Quant Time: Nov 12 15:22 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8 (IS)	5.97	136	17912	2.50000	ppb	0.00
6) Acenaphthene-D10 (IS)	8.01	164	9359	2.50000	ppb	0.00
11) Phenanthrene-D10 (IS)	9.76	188	15147	2.50000	ppb	0.01
15) Chrysene-D12 (IS)	12.92	240	18925	2.50000	ppb	0.01
21) Perylene-D12 (IS)	15.46	264	10840	2.50000	ppb	0.01

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	5.15	82	1376	1.59789	ppb	0.02
Spiked Amount	2.500		Recovery	=	63.920%	
7) Surrogate Recovery (FBP)	7.24	172	4400	0.91053	ppb	0.01
Spiked Amount	2.500		Recovery	=	36.440%	
17) Surrogate Recovery (TPH)	11.62	244	5448	0.92002	ppb	0.00
Spiked Amount	2.500		Recovery	=	36.800%	

Target Compounds

					Qvalue
3) Naphthalene	6.00	128	7208	0.90423	ppb
4) 2-Methylnaphthalene	6.82	142	3949	0.62249	ppb
5) 1-Methylnaphthalene	6.93	142	4883	0.91845	ppb
8) Acenaphthylene	7.86	152	6464	0.84152	ppb
9) Acenaphthene	8.05	154	4066	0.88674	ppb
10) Fluorene	8.66	166	5005	0.89880	ppb
12) Phenanthrene	9.79	178	6673	0.87003	ppb
13) Anthracene	9.86	178	6169	0.87287	ppb
14) Fluoranthene	11.18	202	9664	0.88697	ppb
16) Pyrene	11.45	202	9972	0.90895	ppb
18) Benz (a) anthracene	12.90	228	8531	0.87167	ppb
19) Chrysene	12.95	228	9202	0.94825	ppb
20) Indeno (1,2,3-cd) pyrene	17.68	276	8648	0.88310	ppb
22) Benzo (b) fluoranthene	14.67	252	7522	0.64327	ppb
23) Benzo (k) fluoranthene	14.71	252	5183	0.32334	ppb
24) Benzo (a) pyrene	15.23	252	7156	0.92318	ppb
25) Dibenz (a,h) anthracene	17.71	278	6473	0.86169	ppb
26) Benzo (g,h,i) perylene	18.19	276	7400	0.92071	ppb

Quantitation Report

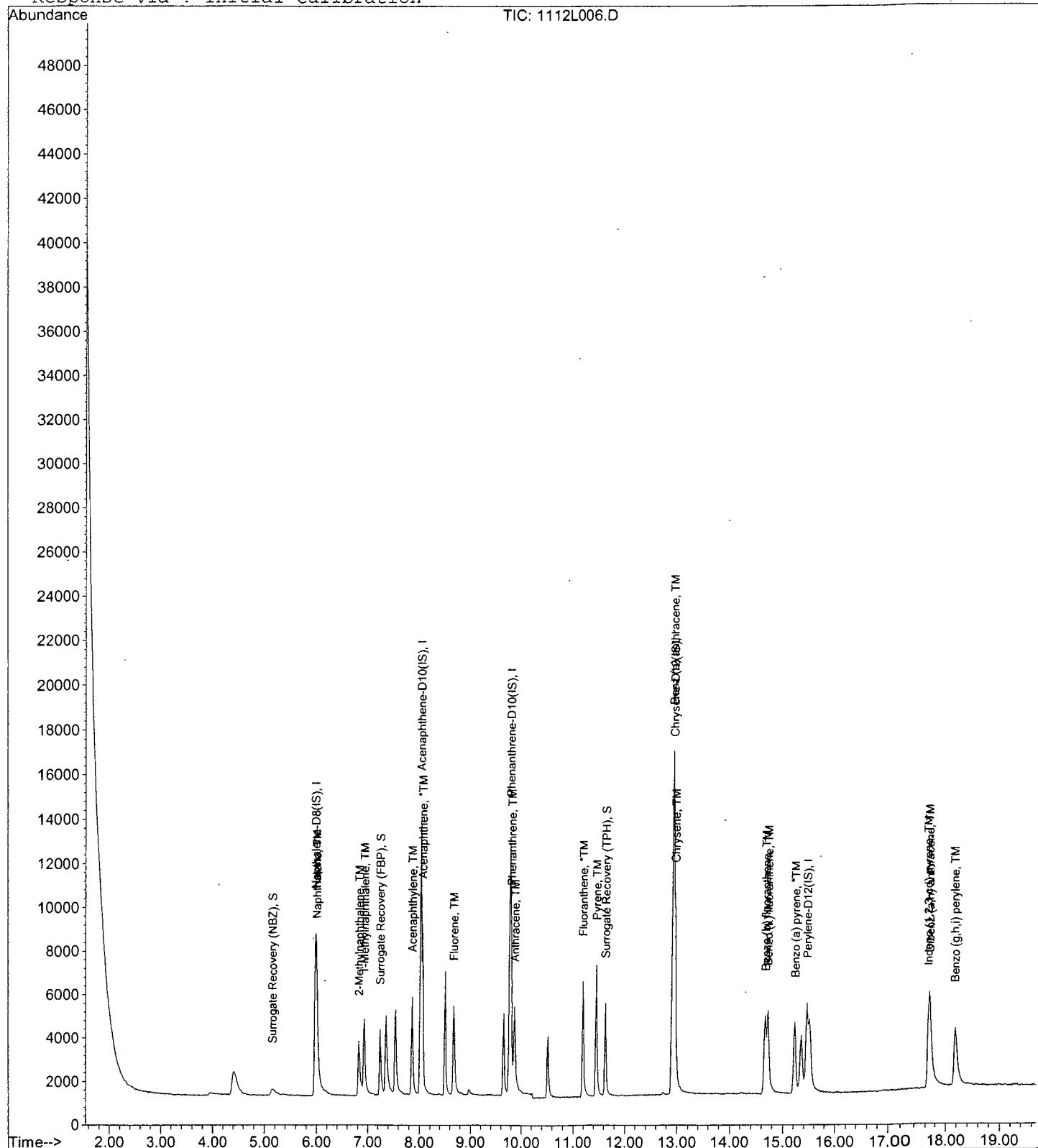
Data File : M:\LINUS\DATA\L151112\1112L006.D
 Acq On : 12 Nov 15 12:28
 Sample : 1.0ug/ml PAH 11/12/15
 Misc :

Vial: 6
 Operator: MA
 Inst : Linus
 Multiplr: 1.00

Quant Time: Nov 12 15:22 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L007.D Vial: 7
 Acq On : 12 Nov 15 12:56 Operator: MA
 Sample : 5.0ug/ml PAH 11/12/15 Inst : Linus
 Misc :

Quant Time: Nov 12 15:23 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8(IS)	5.97	136	16055	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	8.01	164	8311	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.75	188	13755	2.50000	ppb	0.00
15) Chrysene-D12(IS)	12.90	240	17845	2.50000	ppb	0.00
21) Perylene-D12(IS)	15.45	264	10034	2.50000	ppb	0.00

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	5.13	82	8215	4.50567	ppb	0.00
Spiked Amount 2.500			Recovery	= 180.240%		
7) Surrogate Recovery (FBP)	7.23	172	23452	5.46508	ppb	0.00
Spiked Amount 2.500			Recovery	= 218.600%		
17) Surrogate Recovery (TPH)	11.62	244	30424	5.44874	ppb	0.00
Spiked Amount 2.500			Recovery	= 217.960%		

Target Compounds

				Qvalue	
3) Naphthalene	6.00	128	39929	5.58836	ppb
4) 2-Methylnaphthalene	6.81	142	23505	4.86437	ppb
5) 1-Methylnaphthalene	6.92	142	27174	5.70240	ppb
8) Acenaphthylene	7.86	152	36837	5.40036	ppb
9) Acenaphthene	8.05	154	23172	5.69072	ppb
10) Fluorene	8.66	166	27875	5.63700	ppb
12) Phenanthrene	9.79	178	39130	5.61812	ppb
13) Anthracene	9.85	178	34367	5.35477	ppb
14) Fluoranthene	11.18	202	54289	5.48696	ppb
16) Pyrene	11.43	202	56446	5.45648	ppb
18) Benz (a) anthracene	12.89	228	45660	4.94777	ppb
19) Chrysene	12.94	228	51521	5.63045	ppb
20) Indeno (1,2,3-cd) pyrene	17.65	276	49273	5.33610	ppb
22) Benzo (b) fluoranthene	14.65	252	46023	5.05519	ppb
23) Benzo (k) fluoranthene	14.70	252	36355	4.90273	ppb
24) Benzo (a) pyrene	15.21	252	40653	5.66584	ppb
25) Dibenz (a,h) anthracene	17.69	278	39383	5.66380	ppb
26) Benzo (g,h,i) perylene	18.18	276	40798	5.48387	ppb

Quantitation Report

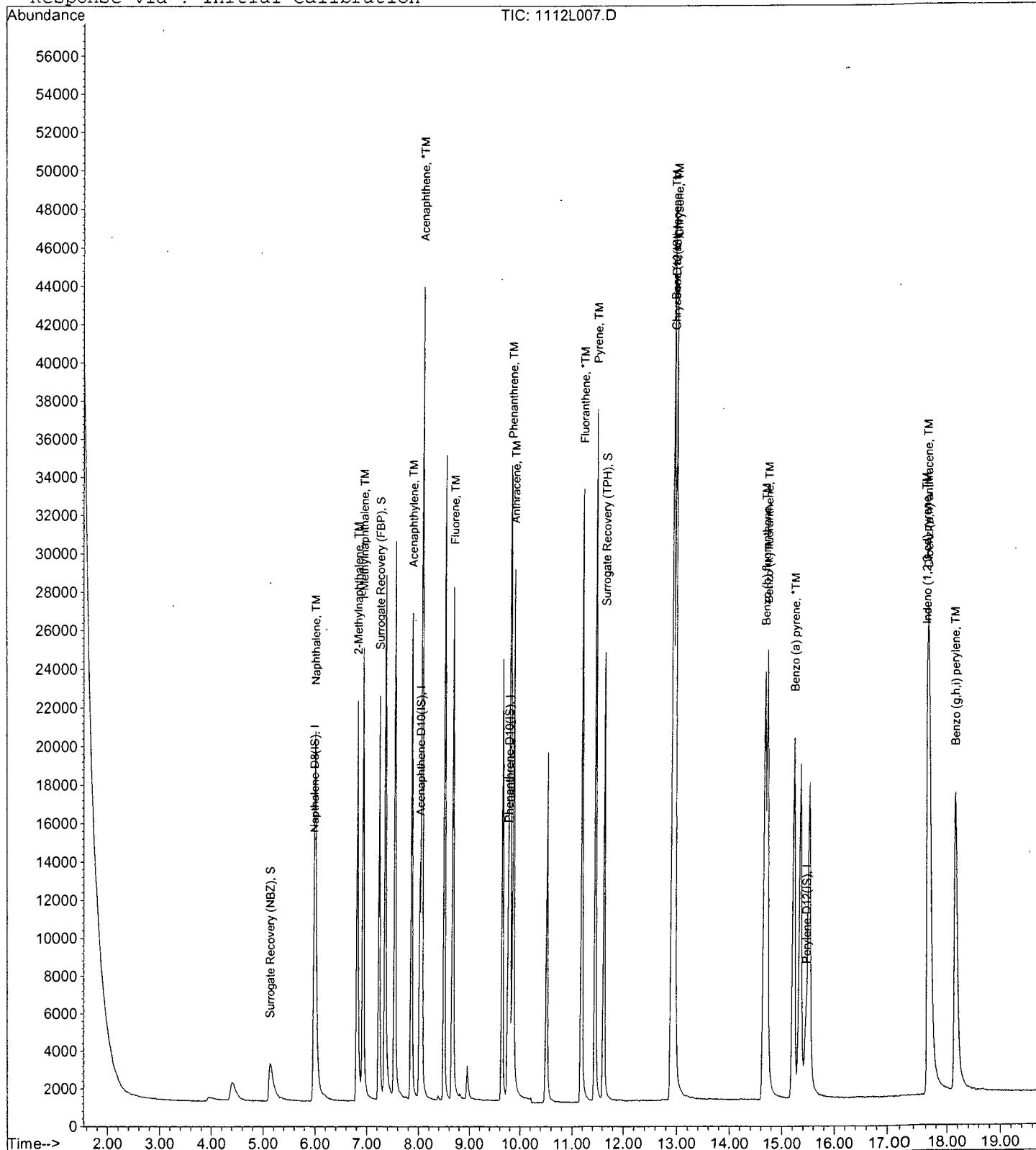
Data File : M:\LINUS\DATA\L151112\1112L007.D
 Acq On : 12 Nov 15 12:56
 Sample : 5.0ug/ml PAH 11/12/15
 Misc :

Vial: 7
 Operator: MA
 Inst : Linus
 Multiplr: 1.00

Quant Time: Nov 12 15:23 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L008.D Vial: 8
 Acq On : 12 Nov 15 13:24 Operator: MA
 Sample : 10ug/ml PAH 11/12/15 Inst : Linus
 Misc : Multiplr: 1.00

Quant Time: Nov 12 15:01 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:00:36 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Napthalene-D8(IS)	5.97	136	20218	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	8.01	164	11269	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.75	188	18297	2.50000	ppb	0.00
15) Chrysene-D12(IS)	12.90	240	24868	2.50000	ppb	0.00
21) Perylene-D12(IS)	15.45	264	14195	2.50000	ppb	0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.13	82	24634	10.62428	ppb	0.00
Spiked Amount 2.500			Recovery	= 424.960%		
7) Surrogate Recovery (FBP)	7.23	172	64082	10.78801	ppb	0.00
Spiked Amount 2.500			Recovery	= 431.520%		
17) Surrogate Recovery (TPH)	11.61	244	84984	10.58411	ppb	-0.01
Spiked Amount 2.500			Recovery	= 423.360%		
Target Compounds						
3) Naphthalene	6.00	128	99752	10.63050	ppb	99
4) 2-Methylnaphthalene	6.81	142	62105	11.79413	ppb	99
5) 1-Methylnaphthalene	6.92	142	68149	10.34224	ppb	99
8) Acenaphthylene	7.84	152	98850	10.34768	ppb	98
9) Acenaphthene	8.05	154	59280	10.13100	ppb	97
10) Fluorene	8.65	166	73889	10.92684	ppb	98
12) Phenanthrene	9.77	178	102015	11.28661	ppb	99
13) Anthracene	9.85	178	96023	10.73326	ppb	100
14) Fluoranthene	11.17	202	145410	10.42805	ppb	# 90
16) Pyrene	11.43	202	150990	9.64735	ppb	98
18) Benz (a) anthracene	12.89	228	131537	10.51023	ppb	100
19) Chrysene	12.94	228	129900	8.89245	ppb	99
20) Indeno (1,2,3-cd) pyrene	17.64	276	133529	10.41817	ppb	# 97
22) Benzo (b) fluoranthene	14.64	252	136815	12.34481	ppb	99
23) Benzo (k) fluoranthene	14.70	252	97481	10.90045	ppb	98
24) Benzo (a) pyrene	15.21	252	112107	10.40562	ppb	98
25) Dibenz (a,h) anthracene	17.68	278	108017	10.91291	ppb	99
26) Benzo (g,h,i) perylene	18.17	276	111175	10.59278	ppb	99

Quantitation Report

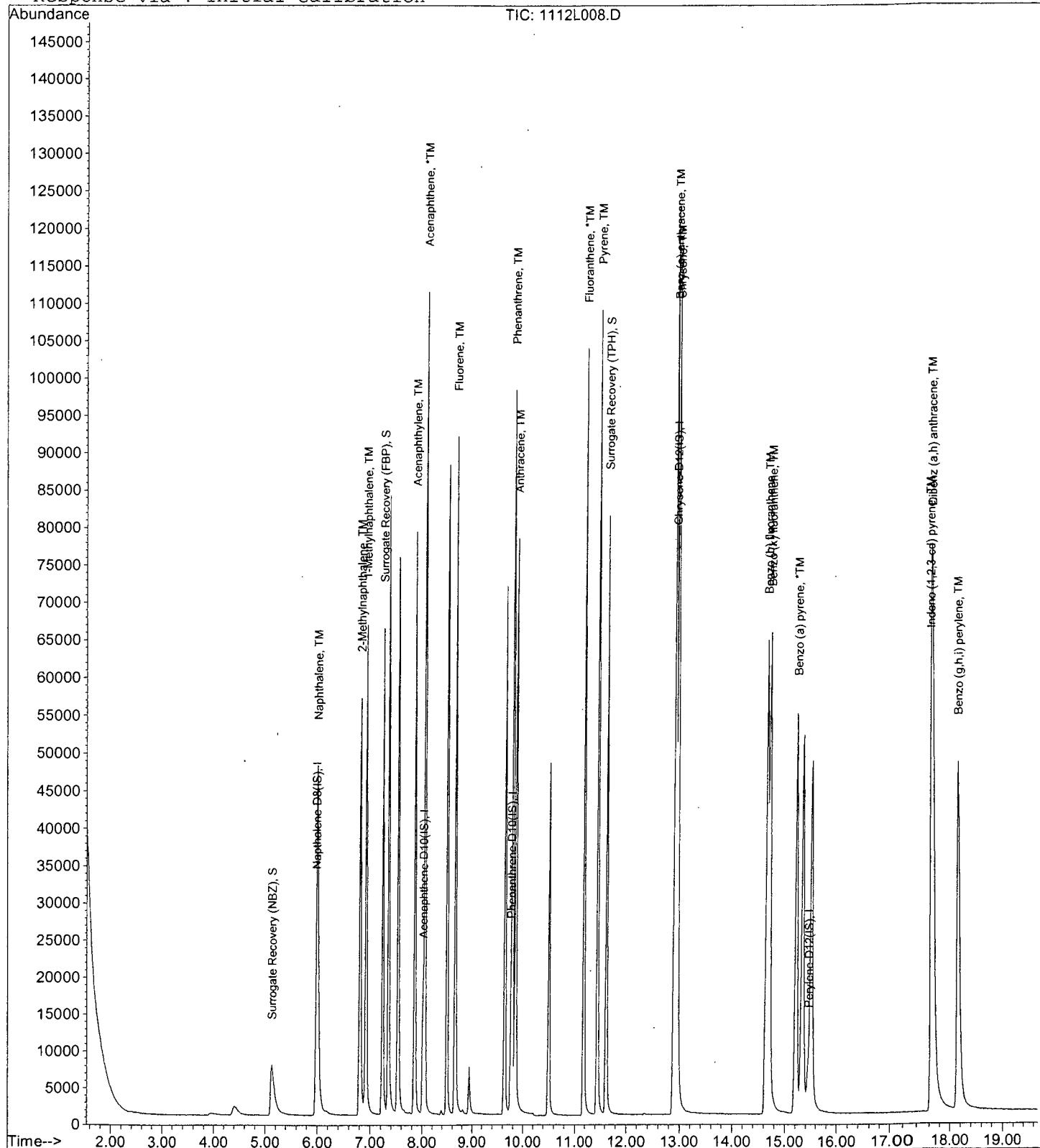
Data File : M:\LINUS\DATA\L151112\1112L008.D
 Acq On : 12 Nov 15 13:24
 Sample : 10ug/ml PAH 11/12/15
 Misc :

Vial: 8
 Operator: MA
 Inst : Linus
 Multiplr: 1.00

Quant Time: Nov 12 15:01 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L009.D Vial: 9
 Acq On : 12 Nov 15 13:51 Operator: MA
 Sample : 50ug/ml PAH 11/12/15 Inst : Linus
 Misc : Multiplr: 1.00

Quant Time: Nov 12 15:01 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:00:36 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Napthalene-D8(IS)	5.96	136	18930	2.50000	ppb	-0.01
6) Acenaphthene-D10(IS)	8.01	164	9891	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.75	188	16459	2.50000	ppb	0.00
15) Chrysene-D12(IS)	12.90	240	22244	2.50000	ppb	0.00
21) Perylene-D12(IS)	15.45	264	13126	2.50000	ppb	0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.12	82	137261	63.22652	ppb	-0.01
Spiked Amount 2.500			Recovery = 2529.080%			
7) Surrogate Recovery (FBP)	7.23	172	286590	54.96822	ppb	0.00
Spiked Amount 2.500			Recovery = 2198.720%			
17) Surrogate Recovery (TPH)	11.61	244	362995	50.54123	ppb	-0.01
Spiked Amount 2.500			Recovery = 2021.640%			
Target Compounds						
3) Naphthalene	5.99	128	461102	52.48278	ppb	99
4) 2-Methylnaphthalene	6.80	142	287013	58.21416	ppb	99
5) 1-Methylnaphthalene	6.92	142	295025	47.81910	ppb	99
8) Acenaphthylene	7.84	152	449999	53.66897	ppb	98
9) Acenaphthene	8.05	154	256882	50.01760	ppb	98
10) Fluorene	8.65	166	320366	53.97671	ppb	99
12) Phenanthrene	9.77	178	440927	54.23039	ppb	99
13) Anthracene	9.85	178	424032	52.69041	ppb	100
14) Fluoranthene	11.17	202	640384	51.05354	ppb	# 90
16) Pyrene	11.43	202	666611	47.61680	ppb	96
18) Benz (a) anthracene	12.89	228	611112	54.59002	ppb	99
19) Chrysene	12.94	228	547462	41.89810	ppb	100
20) Indeno (1,2,3-cd) pyrene	17.65	276	607588	52.99720	ppb	# 94
22) Benzo (b) fluoranthene	14.65	252	585291	57.11177	ppb	99
23) Benzo (k) fluoranthene	14.70	252	496139	59.99716	ppb	99
24) Benzo (a) pyrene	15.21	252	506741	50.86560	ppb	98
25) Dibenz (a,h) anthracene	17.69	278	493642	53.93411	ppb	99
26) Benzo (g,h,i) perylene	18.17	276	500347	51.55577	ppb	96

Quantitation Report

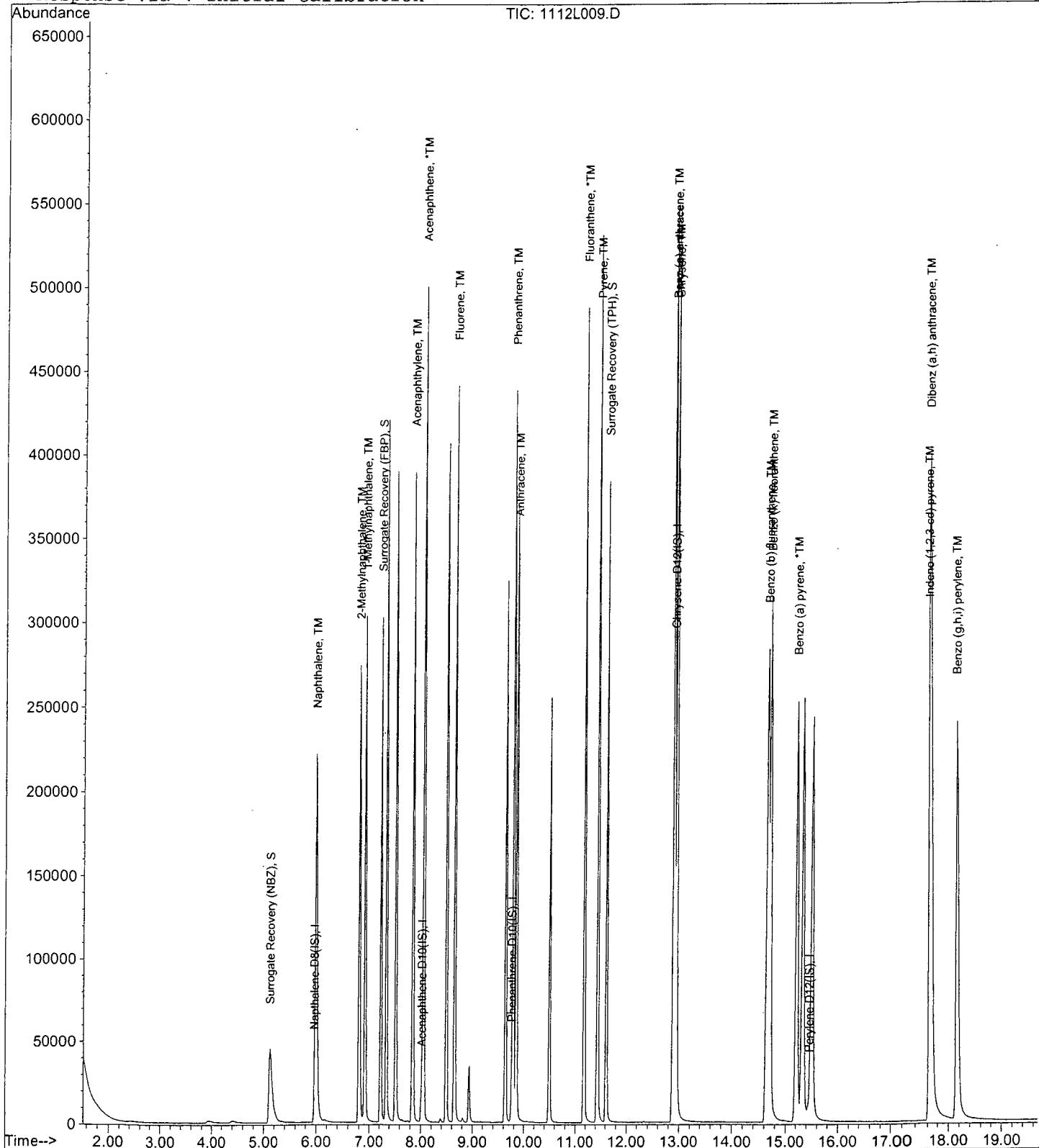
Data File : M:\LINUS\DATA\L151112\1112L009.D
 Acq On : 12 Nov 15 13:51
 Sample : 50ug/ml PAH 11/12/15
 Misc :

Vial: 9
 Operator: MA
 Inst : Linus
 Multiplr: 1.00

Quant Time: Nov 12 15:01 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L010.D Vial: 10
 Acq On : 12 Nov 15 14:19 Operator: MA
 Sample : 100ug/ml PAH 11/12/15 Inst : Linus
 Misc :

Quant Time: Nov 12 15:01 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:00:36 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8(IS)	5.96	136	19352	2.50000	ppb	-0.01
6) Acenaphthene-D10(IS)	8.01	164	9906	2.50000	ppb	0.00
11) Phenanthrene-D10(IS)	9.75	188	16169	2.50000	ppb	0.00
15) Chrysene-D12(IS)	12.90	240	21431	2.50000	ppb	0.00
21) Perylene-D12(IS)	15.45	264	12907	2.50000	ppb	0.00

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	5.12	82	287160	129.39003	ppb	-0.01
Spiked Amount 2.500			Recovery	= 5175.600%		
7) Surrogate Recovery (FBP)	7.23	172	541737	103.74831	ppb	0.00
Spiked Amount 2.500			Recovery	= 4149.920%		
17) Surrogate Recovery (TPH)	11.61	244	654614	94.60213	ppb	-0.01
Spiked Amount 2.500			Recovery	= 3784.080%		

Target Compounds

					Qvalue
3) Naphthalene	5.99	128	906040	100.87695	ppb 99
4) 2-Methylnaphthalene	6.80	142	563430	111.78713	ppb 99
5) 1-Methylnaphthalene	6.92	142	563756	89.38373	ppb 100
8) Acenaphthylene	7.84	152	849672	101.18237	ppb 98
9) Acenaphthene	8.05	154	487959	94.86684	ppb 98
10) Fluorene	8.65	166	601795	101.23960	ppb 99
12) Phenanthrene	9.79	178	818862	102.51963	ppb 100
13) Anthracene	9.85	178	759285	96.04131	ppb 99
14) Fluoranthene	11.17	202	1193690	96.87178	ppb # 86
16) Pyrene	11.43	202	1234749	91.54547	ppb 99
18) Benz (a) anthracene	12.89	228	1114834	103.36490	ppb 98
19) Chrysene	12.95	228	1047723	83.22566	ppb 98
20) Indeno (1,2,3-cd) pyrene	17.66	276	1149670	104.08481	ppb # 92
22) Benzo (b) fluoranthene	14.65	252	1137362	112.86508	ppb 98
23) Benzo (k) fluoranthene	14.72	252	869523	106.93392	ppb 99
24) Benzo (a) pyrene	15.23	252	957544	97.74712	ppb 98
25) Dibenz (a,h) anthracene	17.71	278	924834	102.75958	ppb 97
26) Benzo (g,h,i) perylene	18.19	276	943109	98.82685	ppb 97

Quantitation Report

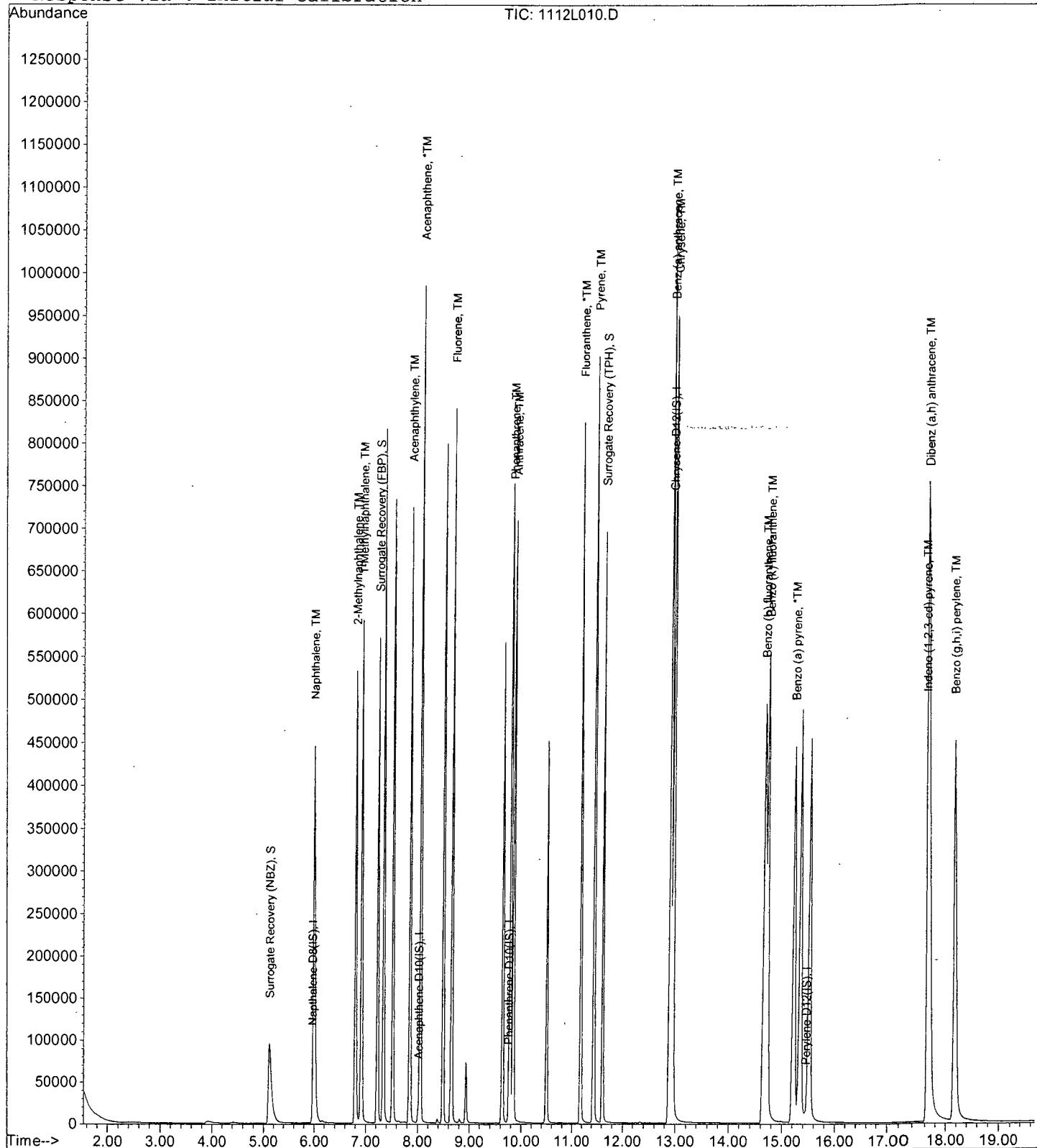
Data File : M:\LINUS\DATA\L151112\1112L010.D
 Acq On : 12 Nov 15 14:19
 Sample : 100ug/ml PAH 11/12/15
 Misc :

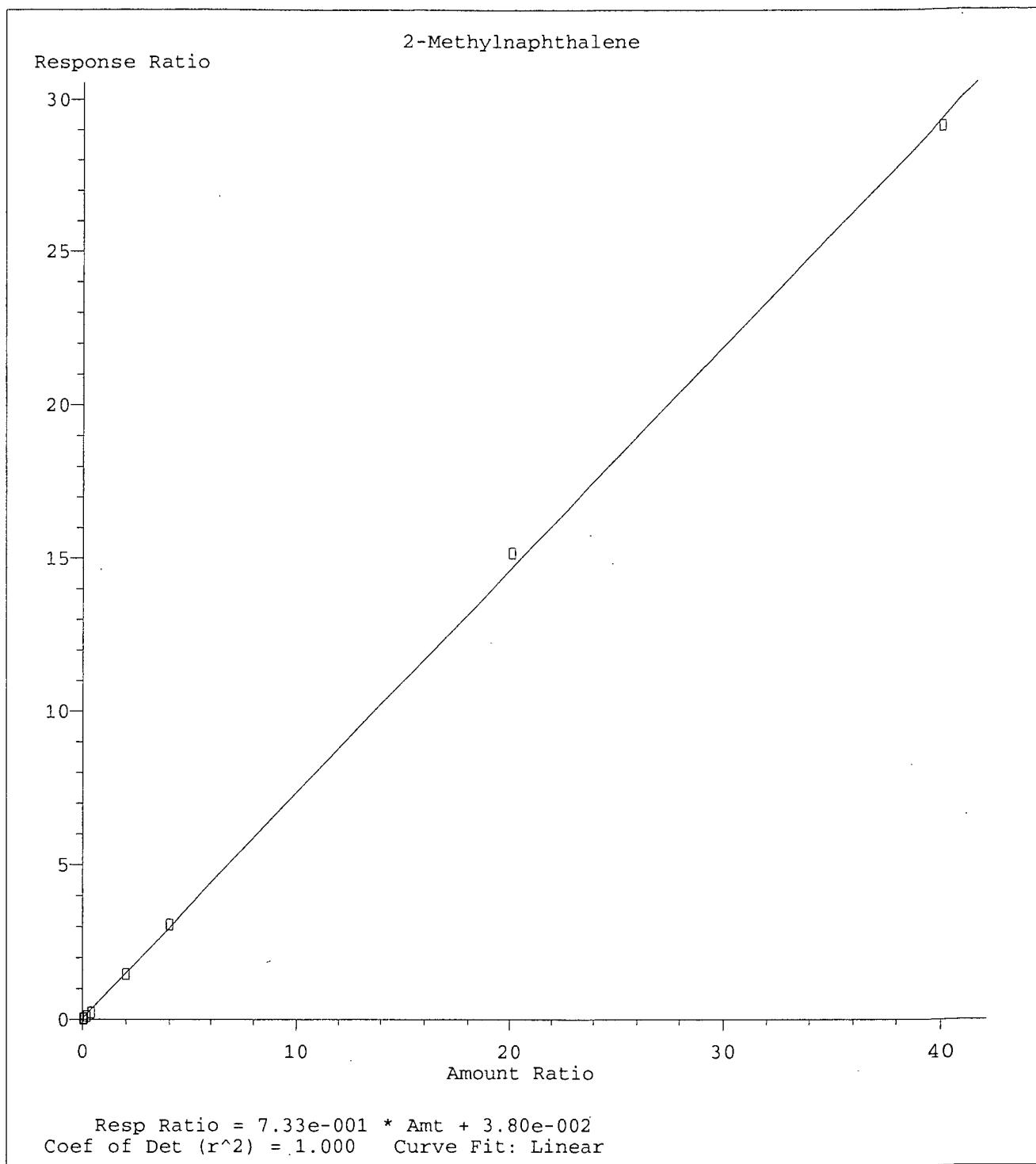
Vial: 10
 Operator: MA
 Inst : Linus
 Multiplr: 1.00

Quant Time: Nov 12 15:01 2015

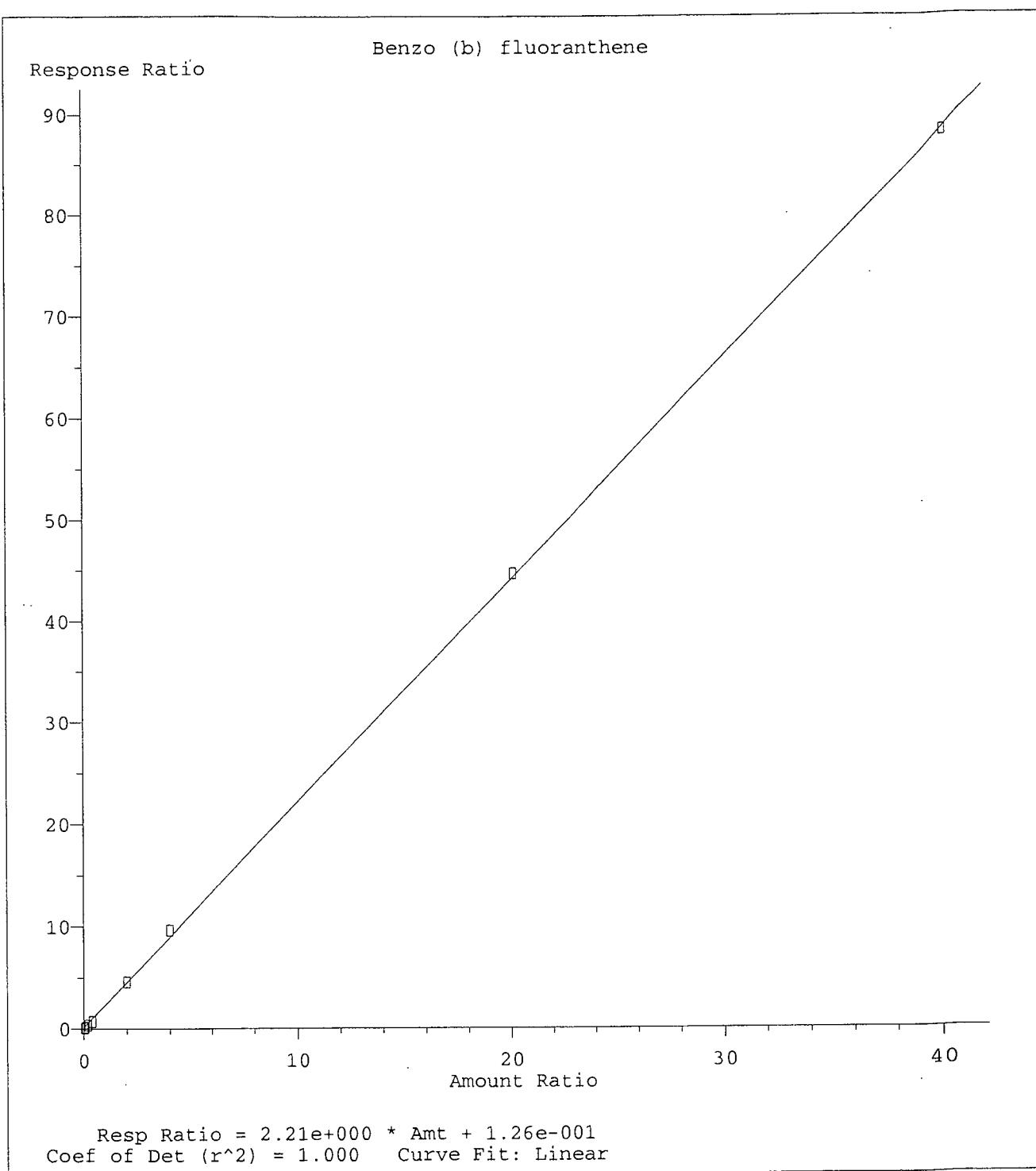
Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration

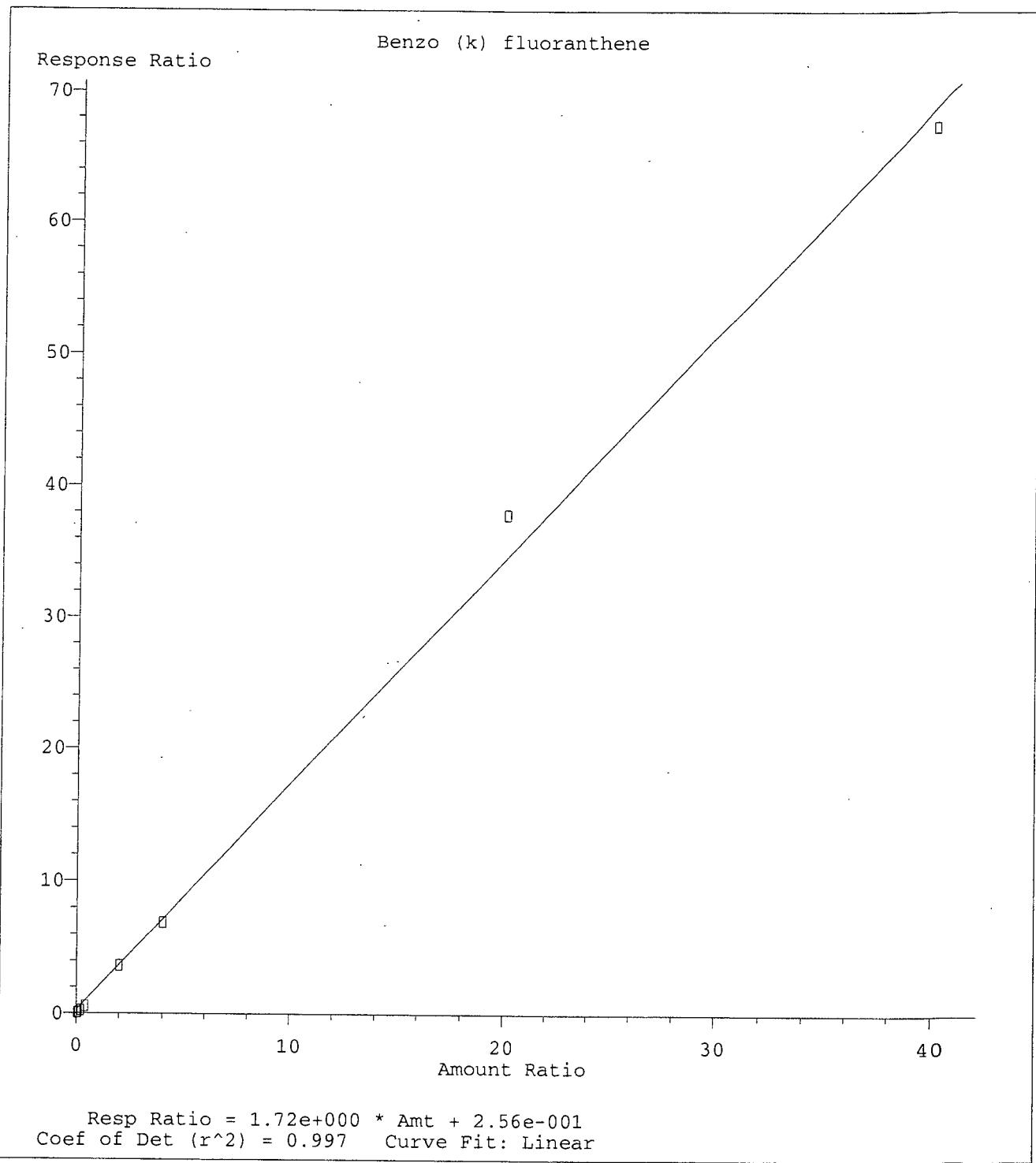




Method Name: M:\LINUS\DATA\L151112\P1112.M
Calibration Table Last Updated: Thu Nov 12 15:22:39 2015



Method Name: M:\LINUS\DATA\L151112\P1112.M
Calibration Table Last Updated: Thu Nov 12 15:22:39 2015



Method Name: M:\LINUS\DATA\L151112\P1112.M
Calibration Table Last Updated: Thu Nov 12 15:22:39 2015

EPA 8270C SIM

Form 7

Second Source Calibration

Lab Name: APPL, Inc.

SDG No:

Case No:

Date Analyzed: 11/12/15

Matrix:

Instrument: Linus

Initial Cal. Date: 11/12/15

Data File: 1112L011.D

		Compound	MEAN	CCRF	%D	%Drift
1	TM	Naphthalene	1.113	1.169	5.1	TM
2	TML	2-Methylnaphthalene	0.6487	0.6650	2.5	TML
3	TM	1-Methylnaphthalene	0.7420	0.7413	0.10	TM
4	TM	Acenaphthylene	2.052	2.104	2.5	TM
5	*TM	Acenaphthene	1.225	1.328	8.4	*TM
6	TM	Fluorene	1.487	1.599	7.5	TM
7	TM	Phenanthrene	1.266	1.271	0.39	TM
8	TM	Anthracene	1.166	1.181	1.3	TM
9	*TM	Fluoranthene	1.798	1.840	2.3	*TM
10	TM	Pyrene	1.449	1.529	5.5	TM
11	TM	Benz (a) anthracene	1.293	1.131	13	TM
12	TM	Chrysene	1.282	1.508	18	TM
13	TM	Indeno (1,2,3-cd) pyrene	1.294	1.327	2.6	TM
14	TML	Benzo (b) fluoranthene	2.043	2.037	0.27	TML
15	TML	Benzo (k) fluoranthene	1.550	1.734	12	TML
16	*TM	Benzo (a) pyrene	1.788	2.125	19	*TM
17	TM	Dibenz (a,h) anthracene	1.732	1.873	8.1	TM
18	TM	Benzo (g,h,i) perylene	1.854	1.923	3.8	TM
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Average

6.2

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L011.D Vial: 11
 Acq On : 12 Nov 15 15:20 Operator: MA
 Sample : 5.0ug/ml PAH SS 11/12/15 Inst : Linus
 Misc :

Quant Time: Nov 12 15:43 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev (Min)
1) Napthalene-D8(IS)	5.97	136	15005	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	8.01	164	7467	2.50000 ppb	0.00
11) Phenanthrene-D10(IS)	9.76	188	12510	2.50000 ppb	0.01
15) Chrysene-D12(IS)	12.92	240	15715	2.50000 ppb	0.01
21) Perylene-D12(IS)	15.46	264	8830	2.50000 ppb	0.01

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	0.00	82	Od	1.08421 ppb
Spiked Amount	2.500		Recovery	= 43.360%
7) Surrogate Recovery (FBP)	0.00	172	Od	0.00000 ppb
Spiked Amount	2.500		Recovery	= 0.000%
17) Surrogate Recovery (TPH)	0.00	244	Od	0.00000 ppb
Spiked Amount	2.500		Recovery	= 0.000%

Target Compounds

				Qvalue
3) Naphthalene	6.00	128	35096	5.25566 ppb 99
4) 2-Methylnaphthalene	6.81	142	19956	4.40704 ppb 100
5) 1-Methylnaphthalene	6.92	142	22247	4.99517 ppb 99
8) Acenaphthylene	7.86	152	31421	5.12703 ppb 98
9) Acenaphthene	8.05	154	19829	5.42015 ppb 100
10) Fluorene	8.66	166	23876	5.37405 ppb 99
12) Phenanthrene	9.79	178	31795	5.01930 ppb 100
13) Anthracene	9.85	178	29555	5.06330 ppb 99
14) Fluoranthene	11.18	202	46031	5.11533 ppb 95
16) Pyrene	11.45	202	48054	5.27486 ppb 93
18) Benz (a) anthracene	12.89	228	35536	4.37265 ppb 98
19) Chrysene	12.95	228	47398	5.88195 ppb 98
20) Indeno (1,2,3-cd) pyrene	17.66	276	41703	5.12843 ppb # 98
22) Benzo (b) fluoranthene	14.65	252	35982	4.47522 ppb 99
23) Benzo (k) fluoranthene	14.71	252	30622	4.67671 ppb 99
24) Benzo (a) pyrene	15.21	252	37530	5.94380 ppb 98
25) Dibenz (a,h) anthracene	17.69	278	33075	5.40521 ppb 96
26) Benzo (g,h,i) perylene	18.18	276	33963	5.18761 ppb 99

Quantitation Report

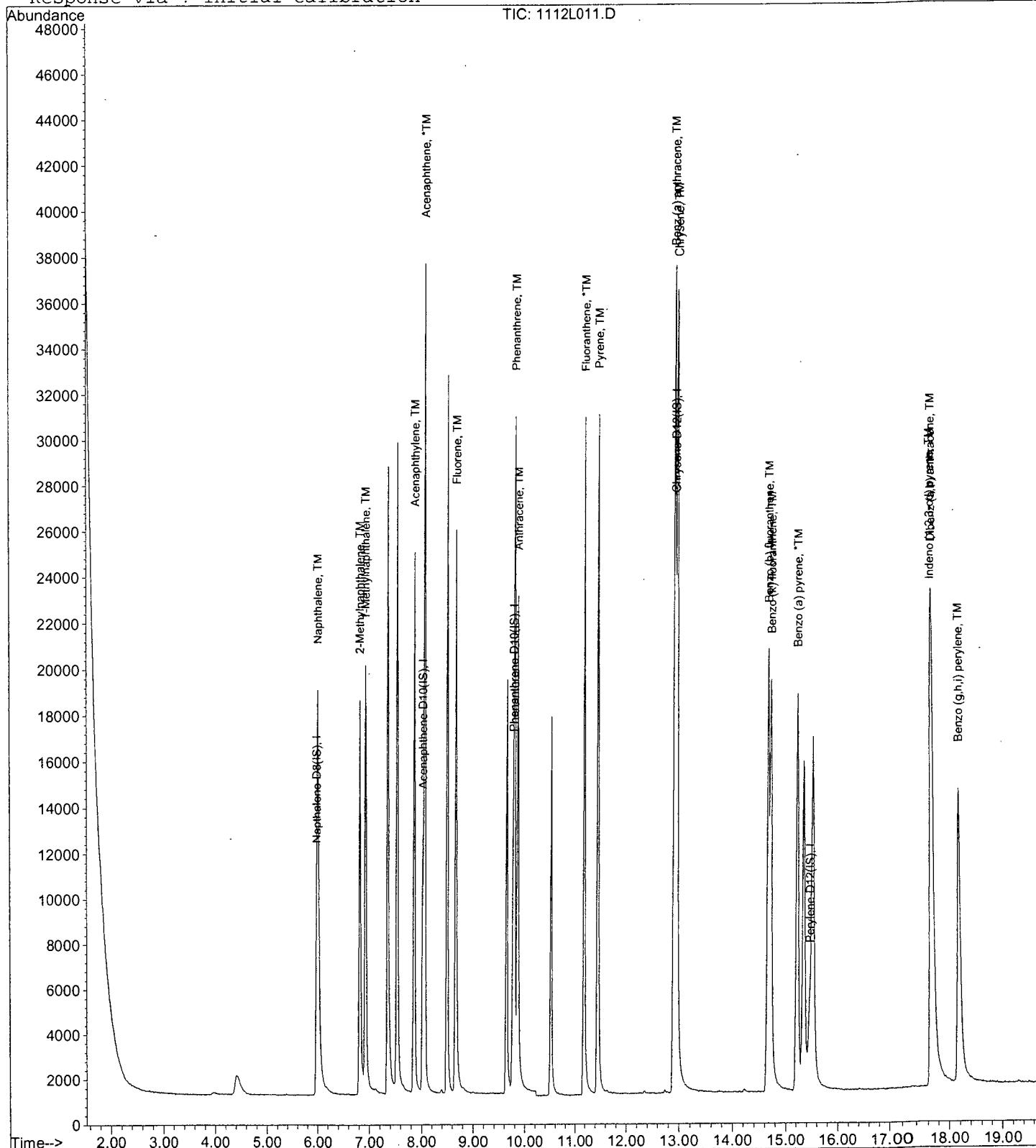
Data File : M:\LINUS\DATA\L151112\1112L011.D
 Acq On : 12 Nov 15 15:20
 Sample : 5.0ug/ml PAH SS 11/12/15
 Misc :

Vial: 11
 Operator: MA
 Inst : Linus
 Multiplr: 1.00

Quant Time: Nov 12 15:43 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration



EPA 8270C SIM

Form 7
Continuing CalibrationLab Name: APPL, Inc.
Case No: _____
Matrix: _____SDG No: _____
Date Analyzed: 11/22/2015
Instrument: Linus
Initial Cal. Date: 11/12/2015
Data File: 1112L175.D

		Compound	MEAN	CCRF	%D	%Drift
1	I	Naphthalene-D8(IS)	ISTD			I
2	SL	Surrogate Recovery (NBZ)	0.2731	0.2303	16	SL 17
3	TM	Naphthalene	1.113	1.087	2.3	TM
4	TML	2-Methylnaphthalene	0.6487	0.6266	3.4	TML 17
5	TM	1-Methylnaphthalene	0.7420	0.6967	6.1	TM
6	I	Acenaphthene-D10(IS)	ISTD			I
7	S	Surrogate Recovery (FBP)	1.291	1.279	0.92	S
8	TM	Acenaphthylene	2.052	2.048	0.16	TM
9	*TM	Acenaphthene	1.225	1.242	1.4	*TM
10	TM	Fluorene	1.487	1.507	1.3	TM
11	I	Phenanthrene-D10(IS)	ISTD			I
12	TM	Phenanthrene	1.266	1.280	1.1	TM
13	TM	Anthracene	1.166	1.175	0.73	TM
14	*TM	Fluoranthene	1.798	1.824	1.4	*TM
15	I	Chrysene-D12(IS)	ISTD			I
16	TM	Pyrene	1.449	1.484	2.4	TM
17	S	Surrogate Recovery (TPH)	0.7822	0.7654	2.1	S
18	TM	Benz (a) anthracene	1.293	1.265	2.1	TM
19	TM	Chrysene	1.282	1.239	3.3	TM
20	TM	Indeno (1,2,3-cd) pyrene	1.294	1.050	19	TM
21	I	Perylene-D12(IS)	ISTD			I
22	TML	Benzo (b) fluoranthene	2.043	2.040	0.17	TML 10
23	TML	Benzo (k) fluoranthene	1.550	1.963	27	TML 6.9
24	*TM	Benzo (a) pyrene	1.788	1.908	6.8	*TM
25	TM	Dibenz (a,h) anthracene	1.732	1.525	12	TM
26	TM	Benzo (g,h,i) perylene	1.854	1.680	9.4	TM
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Average

5.7

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L175.D Vial: 75
 Acq On : 22 Nov 15 20:42 Operator: MA
 Sample : CCV: 5.0ug/ml PAH 11/22/15 Inst : Linus
 Misc : soil Multiplr: 1.00

Quant Time: Nov 24 11:23 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8 (IS)	5.97	136	14744	2.50	ppb	0.00
6) Acenaphthene-D10 (IS)	8.01	164	6960	2.50	ppb	0.00
11) Phenanthrene-D10 (IS)	9.75	188	11145	2.50	ppb	0.00
15) Chrysene-D12 (IS)	12.90	240	14470	2.50	ppb	0.00
21) Perylene-D12 (IS)	15.45	264	7462	2.50	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
2) Surrogate Recovery (NBZ)	5.14	82	6792	4.16	ppb	0.01
Spiked Amount 2.500			Recovery	=	166.600%	
7) Surrogate Recovery (FBP)	7.23	172	17803	4.95	ppb	0.00
Spiked Amount 2.500			Recovery	=	198.160%	
17) Surrogate Recovery (TPH)	11.61	244	22152	4.89	ppb	-0.01
Spiked Amount 2.500			Recovery	=	195.720%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) Naphthalene	6.00	128	32040	4.88	ppb	100
4) 2-Methylnaphthalene	6.81	142	18476	4.14	ppb	99
5) 1-Methylnaphthalene	6.92	142	20543	4.69	ppb	98
8) Acenaphthylene	7.84	152	28515	4.99	ppb	98
9) Acenaphthene	8.05	154	17290	5.07	ppb	98
10) Fluorene	8.65	166	20982	5.07	ppb	97
12) Phenanthrene	9.77	178	28520	5.05	ppb	99
13) Anthracene	9.85	178	26190	5.04	ppb	99
14) Fluoranthene	11.17	202	40659	5.07	ppb	# 87
16) Pyrene	11.43	202	42935	5.12	ppb	96
18) Benz (a) anthracene	12.89	228	36623	4.89	ppb	98
19) Chrysene	12.94	228	35866	4.83	ppb	100
20) Indeno (1,2,3-cd) pyrene	17.65	276	30392	4.06	ppb	# 93
22) Benzo (b) fluoranthene	14.64	252	30439	4.48	ppb	98
23) Benzo (k) fluoranthene	14.70	252	29292	5.34	ppb	99
24) Benzo (a) pyrene	15.20	252	28481	5.34	ppb	96
25) Dibenz (a,h) anthracene	17.69	278	22755	4.40	ppb	100
26) Benzo (g,h,i) perylene	18.17	276	25076	4.53	ppb	96

Quantitation Report

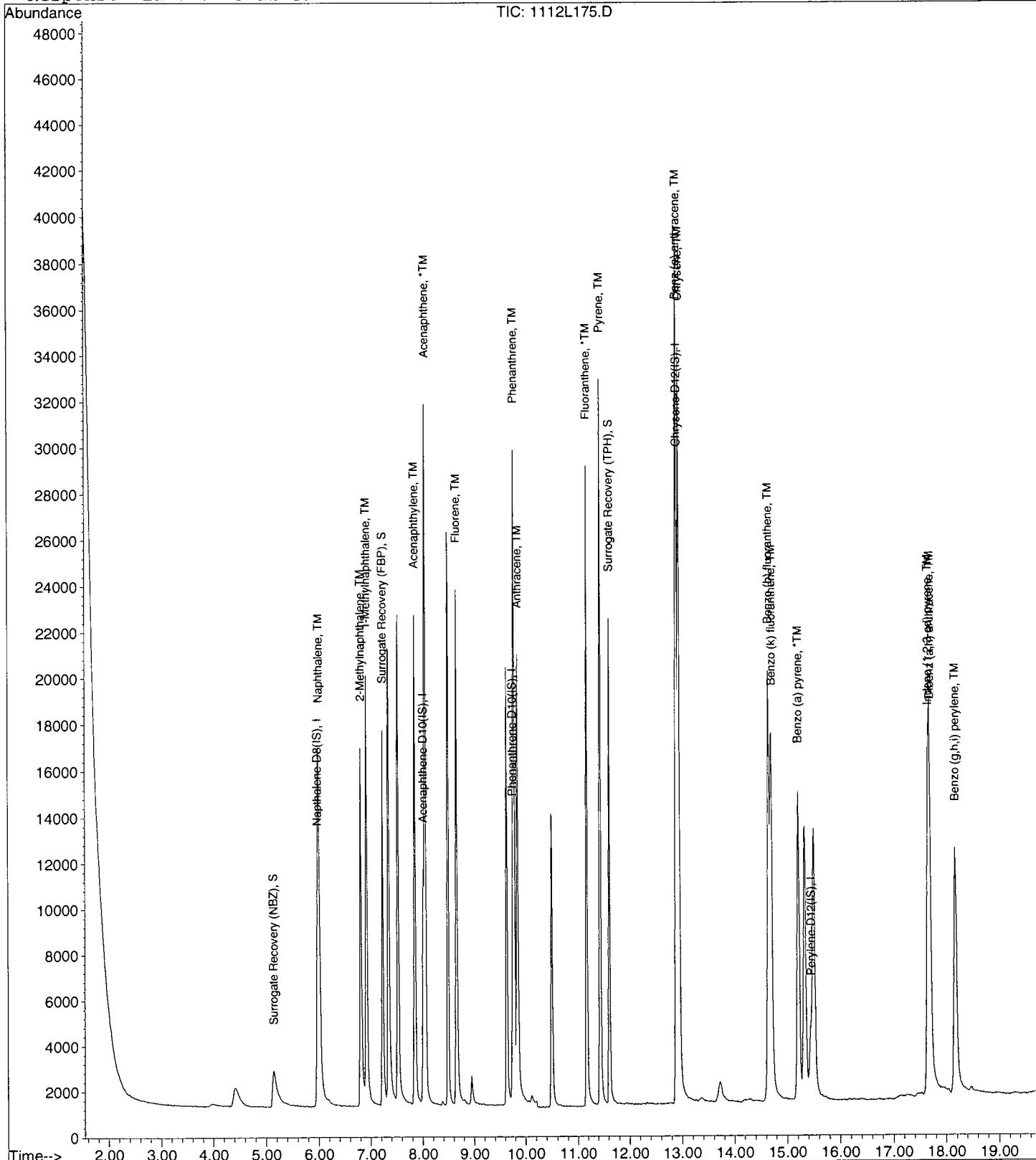
Data File : M:\LINUS\DATA\L151112\1112L175.D
 Acq On : 22 Nov 15 20:42
 Sample : CCV: 5.0ug/ml PAH 11/22/15
 Misc : soil

Vial: 75
 Operator: MA
 Inst : Linus
 Multiplr: 1.00

Quant Time: Nov 24 11:23 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration



EPA 8270C SIM

Form 7
Continuing CalibrationLab Name: APPL, Inc.
Case No: _____
Matrix: _____SDG No: _____
Date Analyzed: 11/24/2015
Instrument: Linus
Initial Cal. Date: 11/12/2015
Data File: 1112L196.D

		Compound	MEAN	CCRF	%D	%Drift
1	I	Naphthalene-D8(IS)	ISTD			I
2	SL	Surrogate Recovery (NBZ)	0.2731	0.2993	9.6	SL 1.7
3	TM	Naphthalene	1.113	1.160	4.2	TM
4	TML	2-Methylnaphthalene	0.6487	0.6717	3.5	TML 11
5	TM	1-Methylnaphthalene	0.7420	0.7528	1.4	TM
6	I	Acenaphthene-D10(IS)	ISTD			I
7	S	Surrogate Recovery (FBP)	1.291	1.448	12	S
8	TM	Acenaphthylene	2.052	2.215	8.0	TM
9	*TM	Acenaphthene	1.225	1.360	11	*TM
10	TM	Fluorene	1.487	1.634	9.9	TM
11	I	Phenanthrene-D10(IS)	ISTD			I
12	TM	Phenanthrene	1.266	1.384	9.3	TM
13	TM	Anthracene	1.166	1.268	8.7	TM
14	*TM	Fluoranthene	1.798	1.936	7.7	*TM
15	I	Chrysene-D12(IS)	ISTD			I
16	TM	Pyrene	1.449	1.556	7.3	TM
17	S	Surrogate Recovery (TPH)	0.7822	0.8504	8.7	S
18	TM	Benz (a) anthracene	1.293	1.345	4.0	TM
19	TM	Chrysene	1.282	1.315	2.6	TM
20	TM	Indeno (1,2,3-cd) pyrene	1.294	1.367	5.7	TM
21	I	Perylene-D12(IS)	ISTD			I
22	TML	Benzo (b) fluoranthene	2.043	2.048	0.26	TML 10
23	TML	Benzo (k) fluoranthene	1.550	2.069	33	TML 13
24	*TM	Benzo (a) pyrene	1.788	1.958	9.5	*TM
25	TM	Dibenz (a,h) anthracene	1.732	1.927	11	TM
26	TM	Benzo (g,h,i) perylene	1.854	1.973	6.5	TM
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Average

8.3

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L196.D Vial: 96
 Acq On : 24 Nov 15 12:33 Operator: MA
 Sample : CCV: 5.0ug/ml PAH 11/22/15 Inst : Linus
 Misc : soil Multiplr: 1.00

Quant Time: Nov 24 17:52 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-D8(IS)	5.96	136	17400	2.50	ppb	-0.01
6) Acenaphthene-D10(IS)	8.01	164	8015	2.50	ppb	0.00
11) Phenanthrene-D10(IS)	9.75	188	12909	2.50	ppb	0.00
15) Chrysene-D12(IS)	12.90	240	16980	2.50	ppb	0.00
21) Perylene-D12(IS)	15.45	264	9764	2.50	ppb	0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.12	82	10415	5.09	ppb	-0.01
Spiked Amount 2.500			Recovery	=	203.480%	
7) Surrogate Recovery (FBP)	7.23	172	23204	5.61	ppb	0.00
Spiked Amount 2.500			Recovery	=	224.280%	
17) Surrogate Recovery (TPH)	11.61	244	28879	5.44	ppb	-0.01
Spiked Amount 2.500			Recovery	=	217.440%	
Target Compounds						
3) Naphthalene	5.99	128	40356	5.21	ppb	99
4) 2-Methylnaphthalene	6.81	142	23376	4.45	ppb	100
5) 1-Methylnaphthalene	6.92	142	26197	5.07	ppb	99
8) Acenaphthylene	7.84	152	35511	5.40	ppb	98
9) Acenaphthene	8.05	154	21798	5.55	ppb	97
10) Fluorene	8.65	166	26199	5.49	ppb	97
12) Phenanthrene	9.77	178	35731	5.47	ppb	99
13) Anthracene	9.85	178	32737	5.44	ppb	100
14) Fluoranthene	11.17	202	49981	5.38	ppb	# 88
16) Pyrene	11.43	202	52833	5.37	ppb	98
18) Benz (a) anthracene	12.89	228	45665	5.20	ppb	100
19) Chrysene	12.94	228	44661	5.13	ppb	100
20) Indeno (1,2,3-cd) pyrene	17.65	276	46430	5.28	ppb	# 91
22) Benzo (b) fluoranthene	14.64	252	40001	4.50	ppb	98
23) Benzo (k) fluoranthene	14.70	252	40408	5.65	ppb	99
24) Benzo (a) pyrene	15.20	252	38241	5.48	ppb	96
25) Dibenz (a,h) anthracene	17.69	278	37633	5.56	ppb	99
26) Benzo (g,h,i) perylene	18.17	276	38537	5.32	ppb	97

Quantitation Report

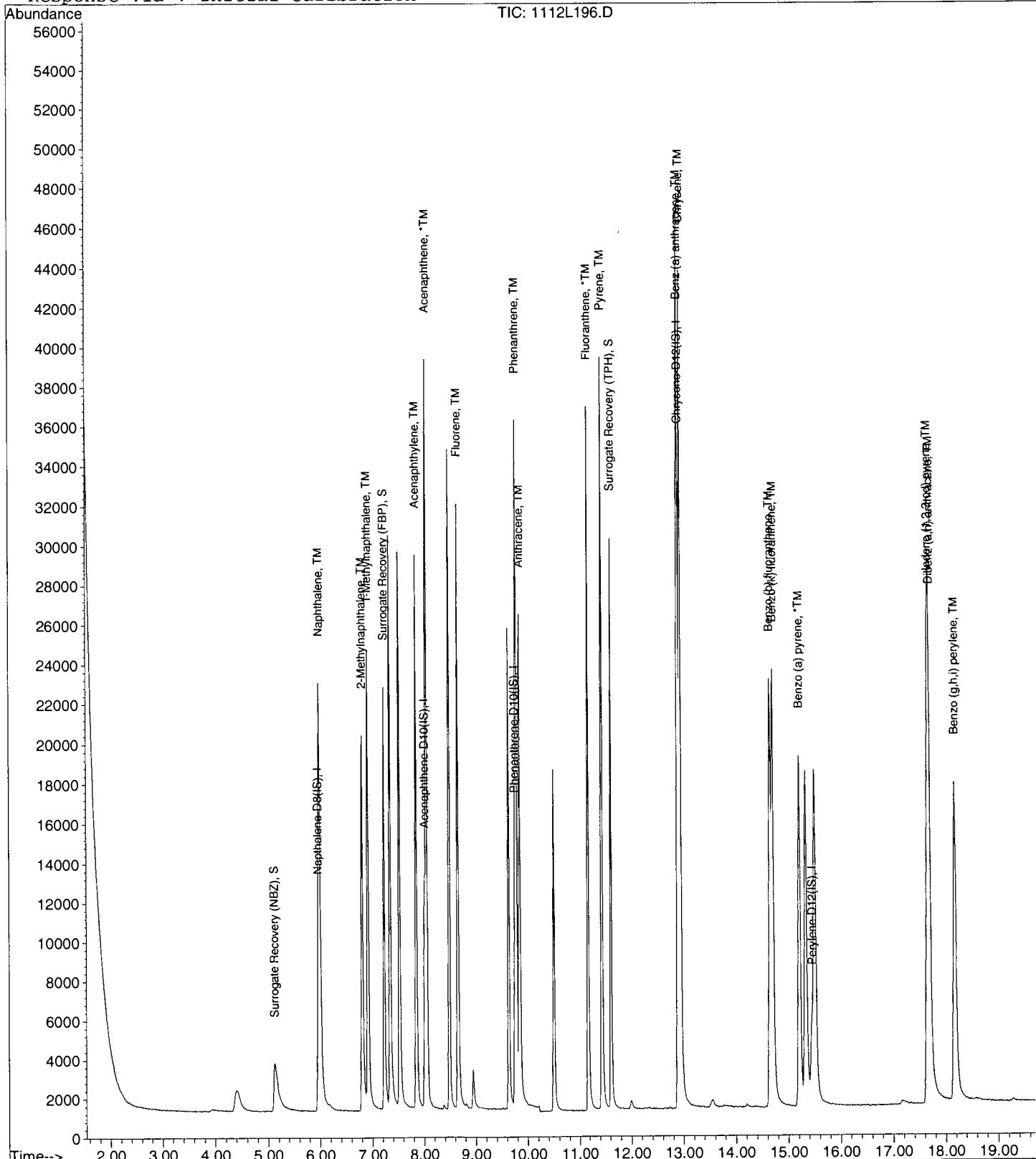
Data File : M:\LINUS\DATA\L151112\1112L196.D
 Acq On : 24 Nov 15 12:33
 Sample : CCV: 5.0ug/ml PAH 11/22/15
 Misc : soil

Vial: 96
 Operator: MA
 Inst : Linus
 Multiplr: 1.00

Quant Time: Nov 24 17:52 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L197.D Vial: 97
 Acq On : 24 Nov 15 13:31 Operator: MA
 Sample : AZ24401S03 MSD-1 1/30.04G Inst : Linus
 Misc : SOIL Multiplr: 33.29

Quant Time: Nov 24 17:53 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Napthalene-D8 (IS)	5.96	136	19000	2.50	ppb	-0.01
6) Acenaphthene-D10 (IS)	8.01	164	8890	2.50	ppb	0.00
11) Phenanthrene-D10 (IS)	9.75	188	14401	2.50	ppb	0.00
15) Chrysene-D12 (IS)	12.90	240	19179	2.50	ppb	0.00
21) Perylene-D12 (IS)	15.45	264	10774	2.50	ppb	0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.13	82	4087	83.97	ppb	0.00
Spiked Amount 83.222			Recovery	= 100.902%		
7) Surrogate Recovery (FBP)	7.23	172	9987	72.43	ppb	0.00
Spiked Amount 83.222			Recovery	= 87.028%		
17) Surrogate Recovery (TPH)	11.61	244	13600	75.44	ppb	-0.01
Spiked Amount 83.222			Recovery	= 90.650%		
Target Compounds						
3) Naphthalene	5.99	128	37149	146.25	ppb	100
4) 2-Methylnaphthalene	6.81	142	23542	136.38	ppb	97
5) 1-Methylnaphthalene	6.92	142	25116	148.26	ppb	99
8) Acenaphthylene	7.84	152	35548	162.18	ppb	97
9) Acenaphthene	8.05	154	21769	166.38	ppb	98
10) Fluorene	8.65	166	26975	169.76	ppb	99
12) Phenanthrene	9.77	178	37445	170.94	ppb	98
13) Anthracene	9.85	178	31895	158.01	ppb	100
14) Fluoranthene	11.17	202	55330	177.81	ppb	# 89
16) Pyrene	11.43	202	56939	170.48	ppb	99
18) Benz (a) anthracene	12.89	228	52622	176.62	ppb	100
19) Chrysene	12.94	228	47633	161.23	ppb	100
20) Indeno (1,2,3-cd) pyrene	17.65	276	50540	169.53	ppb	92
22) Benzo (b) fluoranthene	14.65	252	50084	170.62	ppb	99
23) Benzo (k) fluoranthene	14.70	252	38611	161.29	ppb	99
24) Benzo (a) pyrene	15.21	252	38754	167.45	ppb	97
25) Dibenz (a,h) anthracene	17.69	278	39766	177.30	ppb	98
26) Benzo (g,h,i) perylene	18.18	276	42286	176.21	ppb	99

Quantitation Report

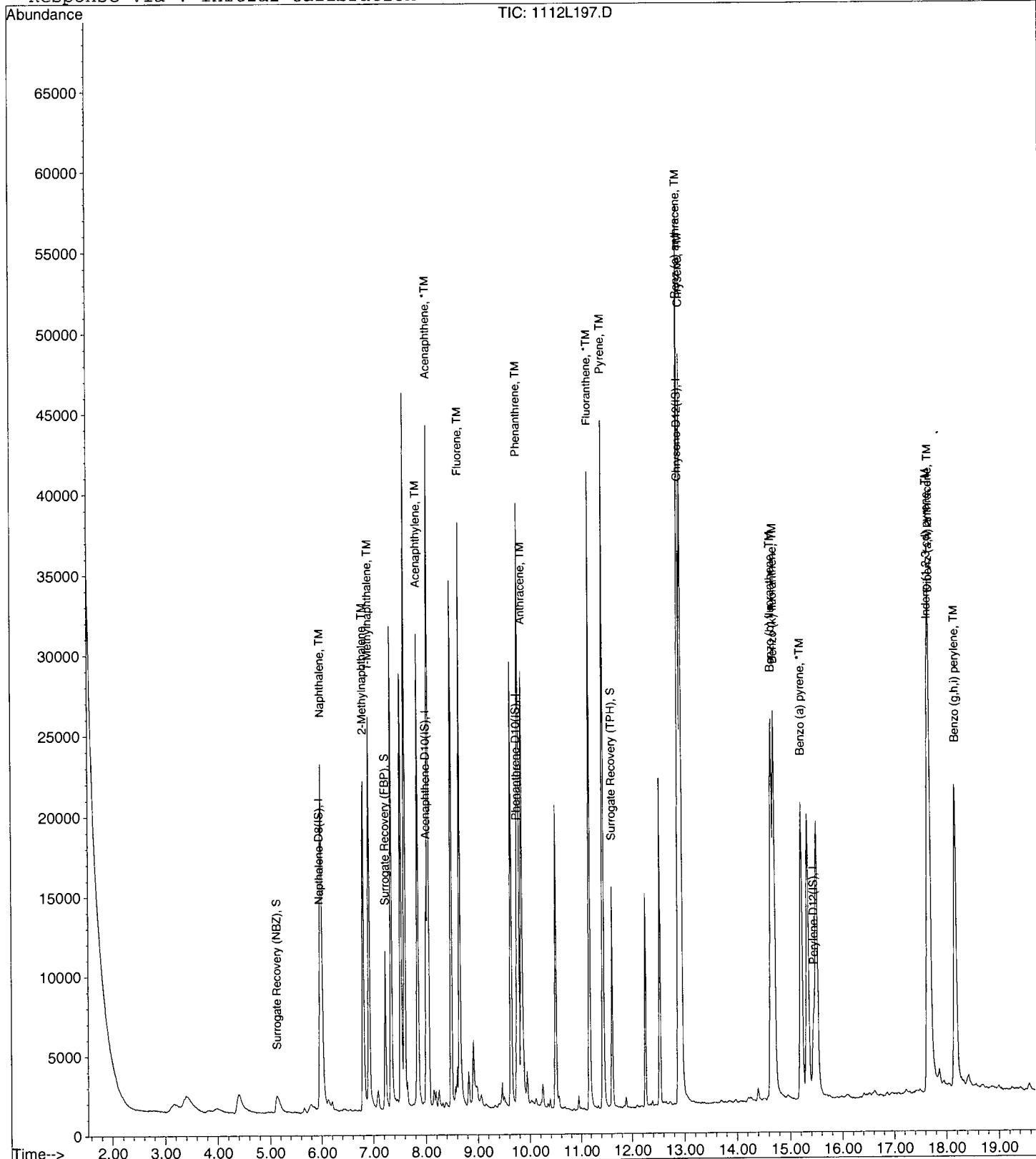
Data File : M:\LINUS\DATA\L151112\1112L197.D
 Acq On : 24 Nov 15 13:31
 Sample : AZ24401S03 MSD-1 1/30.04G
 Misc : SOIL

Vial: 97
 Operator: MA
 Inst : Linus
 Multiplr: 33.29

Quant Time: Nov 24 17:53 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration



EPA METHOD 8270D
Polynuclear Aromatic Hydrocarbons
Raw Data

Method Blank
EPA 8270D LL SOILS

Blank Name/QCG: **151117S-24401 - 202551**
 Batch ID: #SIMDD-151117A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-METHYLNAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	ACENAPHTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	11/17/2015	11/22/2015
BLANK	ACENAPHTHYLENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	ANTHRACENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	11/17/2015	11/22/2015
BLANK	BENZ (A) ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	BENZO (A) PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	BENZO (B) FLUORANTHENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	11/17/2015	11/22/2015
BLANK	BENZO (G,H,I) PERYLENE	0.0017 U	0.005	0.0017	0.0013	mg/kg	11/17/2015	11/22/2015
BLANK	BENZO (K) FLUORANTHENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	11/17/2015	11/22/2015
BLANK	CHRYSENE	0.0017 U	0.005	0.0017	0.0008	mg/kg	11/17/2015	11/22/2015
BLANK	DIBENZ (A,H) ANTHRACENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	FLUORANTHENE	0.0017 U	0.005	0.0017	0.0012	mg/kg	11/17/2015	11/22/2015
BLANK	FLUORENE	0.0017 U	0.005	0.0017	0.0010	mg/kg	11/17/2015	11/22/2015
BLANK	INDENO (1,2,3-CD) PYRENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	NAPHTHALENE	0.0017 U	0.005	0.0017	0.0009	mg/kg	11/17/2015	11/22/2015
BLANK	PHENANTHRENE	0.0017 U	0.005	0.0017	0.0011	mg/kg	11/17/2015	11/22/2015
BLANK	PYRENE	0.0017 U	0.005	0.0017	0.0012	mg/kg	11/17/2015	11/22/2015
BLANK	SURROGATE: 2-FLUORBIPHENY	53.8	45-105			%	11/17/2015	11/22/2015
BLANK	SURROGATE: NITROBENZENE-	67.2	35-100			%	11/17/2015	11/22/2015
BLANK	SURROGATE: TERPHENYL-D14 (	76.8	30-125			%	11/17/2015	11/22/2015

Quant Method: P1112.M
Run #: 1112L176
Instrument: Linus
Sequence: L151112
Initials: DA

GC SC-Blank-REG MDLs-DOD
 Printed: 11/25/2015 8:52:43 AM

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L176.D Vial: 76
 Acq On : 22 Nov 15 21:10 Operator: MA
 Sample : 151117A BLK 1/30.01G Inst : Linus
 Misc : soil Multiplr: 1.00

Quant Time: Nov 24 11:23 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8 (IS)	5.97	136	20453	2.50	ppb	0.00
6) Acenaphthene-D10 (IS)	8.01	164	9751	2.50	ppb	0.00
11) Phenanthrene-D10 (IS)	9.76	188	15686	2.50	ppb	0.01
15) Chrysene-D12 (IS)	12.90	240	20700	2.50	ppb	0.00
21) Perylene-D12 (IS)	15.46	264	10839	2.50	ppb	0.01

System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.17	82	1824	1.68	ppb	0.04
Spiked Amount	2.500		Recovery	=	67.240%	
7) Surrogate Recovery (FBP)	7.24	172	6774	1.35	ppb	0.01
Spiked Amount	2.500		Recovery	=	53.800%	
17) Surrogate Recovery (TPH)	11.61	244	12430	1.92	ppb	-0.01
Spiked Amount	2.500		Recovery	=	76.760%	

Target Compounds Qvalue

Quantitation Report

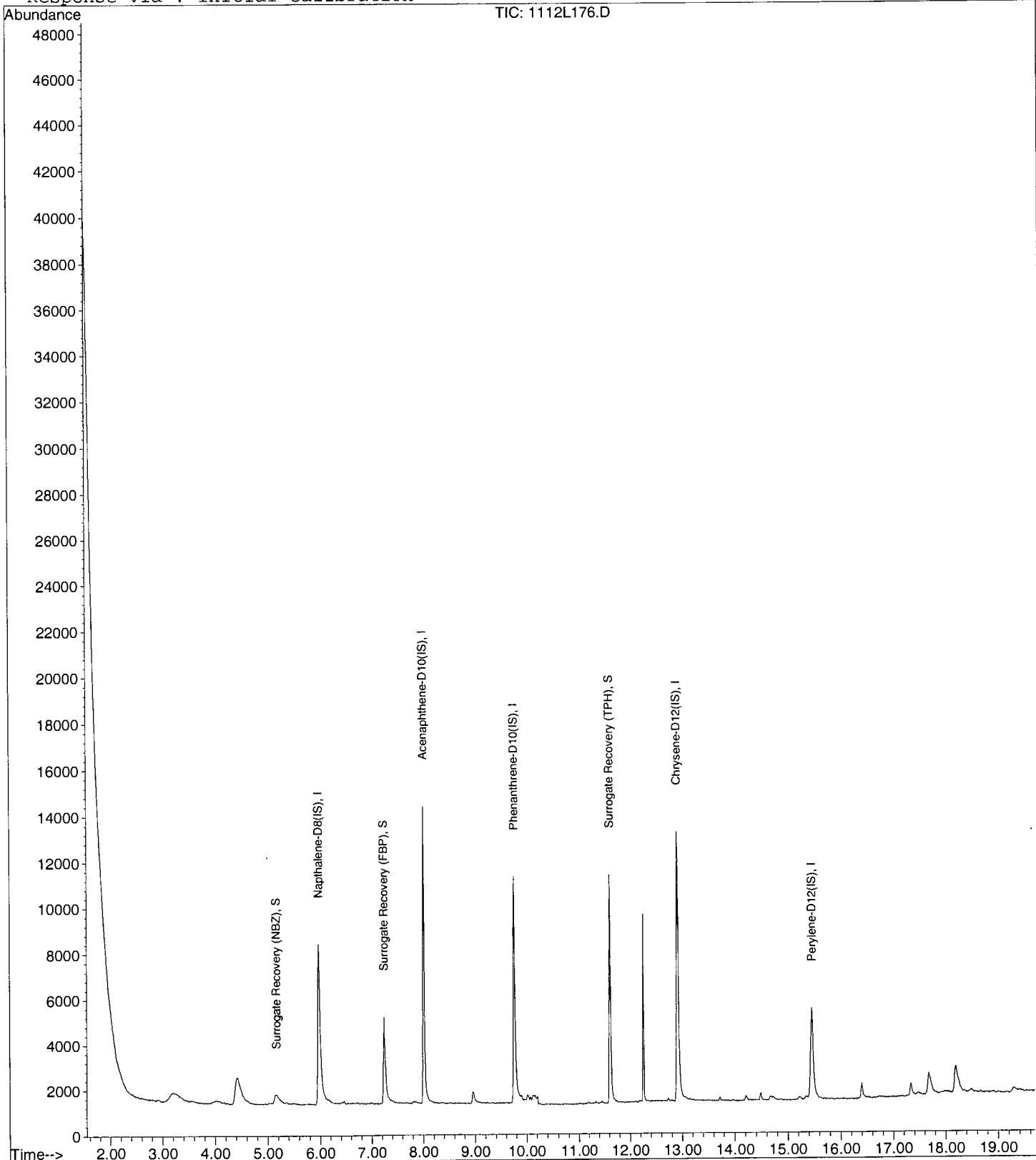
Data File : M:\LINUS\DATA\L151112\1112L176.D
Acq On : 22 Nov 15 21:10
Sample : 151117A BLK 1/30.01G
Misc : soil

Vial: 76
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Nov 24 11:23 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Nov 12 15:22:39 2015
Response via : Initial Calibration



Laboratory Control Spike Recovery
EPA 8270D LL SOILS

APPL ID: **151117S-24401 LCS - 202551**

Batch ID: #SIMDD-151117A

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Level	SPK Result	SPK % Recovery	Recovery
	mg/kg	mg/kg	Recovery	Limits
2-METHYLNAPHTHALENE	0.167	0.0984	58.9	45-105
ACENAPHTHENE	0.167	0.125	74.9	45-110
ACENAPHTHYLENE	0.167	0.120	71.9	45-105
ANTHRACENE	0.167	0.139	83.2	55-105
BENZ (A) ANTHRACENE	0.167	0.154	92.2	50-110
BENZO (A) PYRENE	0.167	0.149	89.2	50-110
BENZO (B) FLUORANTHENE	0.167	0.139	83.2	45-115
BENZO (G,H,I) PERYLENE	0.167	0.126	75.4	40-125
BENZO (K) FLUORANTHENE	0.167	0.150	89.8	45-125
CHRYSENE	0.167	0.146	87.4	55-110
DIBENZ (A,H) ANTHRACENE	0.167	0.133	79.6	40-125
FLUORANTHENE	0.167	0.150	89.8	55-115
FLUORENE	0.167	0.131	78.4	50-110
INDENO (1,2,3-CD) PYRENE	0.167	0.116	69.5	40-120
NAPHTHALENE	0.167	0.109	65.3	40-105
PHENANTHRENE	0.167	0.142	85.0	50-110
PYRENE	0.167	0.151	90.4	45-125
SURROGATE: 2-FLUORBIPHENYL (S)	0.083	0.0547	65.9	45-105
SURROGATE: NITROBENZENE-D5 (S)	0.083	0.0622	74.9	35-100
SURROGATE: TERPHENYL-D14 (S)	0.083	0.0701	84.5	30-125

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	P1112.M
Extraction Date :	11/17/2015
Analysis Date :	11/22/2015
Instrument :	Linus
Run :	1112L177
Initials :	DA

Printed: 11/25/2015 8:52:32 AM

APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L177.D Vial: 77
 Acq On : 22 Nov 15 21:37 Operator: MA
 Sample : 151117A LCS-1 1/30.05G Inst : Linus
 Misc : soil Multiplr: 1.00

Quant Time: Nov 24 8:37 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8 (IS)	5.97	136	21510	2.50	ppb	0.00
6) Acenaphthene-D10 (IS)	8.01	164	10667	2.50	ppb	0.00
11) Phenanthrene-D10 (IS)	9.75	188	16429	2.50	ppb	0.00
15) Chrysene-D12 (IS)	12.90	240	21309	2.50	ppb	0.00
21) Perylene-D12 (IS)	15.44	264	10849	2.50	ppb	-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.15	82	2528	1.87	ppb	0.02
Spiked Amount 2.500			Recovery	=	74.800%	
7) Surrogate Recovery (FBP)	7.23	172	9057	1.64	ppb	0.00
Spiked Amount 2.500			Recovery	=	65.760%	
17) Surrogate Recovery (TPH)	11.61	244	14047	2.11	ppb	-0.01
Spiked Amount 2.500			Recovery	=	84.280%	
Target Compounds						
3) Naphthalene	6.00	128	31250	3.26	ppb	99
4) 2-Methylnaphthalene	6.81	142	19468	2.96	ppb	100
5) 1-Methylnaphthalene	6.92	142	22593	3.54	ppb	100
8) Acenaphthylene	7.84	152	31610	3.61	ppb	99
9) Acenaphthene	8.05	154	19709	3.77	ppb	98
10) Fluorene	8.65	166	25062	3.95	ppb	98
12) Phenanthrene	9.77	178	35607	4.28	ppb	98
13) Anthracene	9.85	178	32032	4.18	ppb	100
14) Fluoranthene	11.17	202	53266	4.51	ppb	# 91
16) Pyrene	11.43	202	56079	4.54	ppb	96
18) Benz (a) anthracene	12.88	228	51042	4.63	ppb	98
19) Chrysene	12.94	228	47934	4.39	ppb	99
20) Indeno (1,2,3-cd) pyrene	17.65	276	38460	3.49	ppb	# 95
22) Benzo (b) fluoranthene	14.64	252	41458	4.19	ppb	98
23) Benzo (k) fluoranthene	14.69	252	36292	4.50	ppb	99
24) Benzo (a) pyrene	15.20	252	34720	4.48	ppb	97
25) Dibenz (a,h) anthracene	17.69	278	29976	3.99	ppb	98
26) Benzo (g,h,i) perylene	18.17	276	30564	3.80	ppb	95

Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L177.D
 Acq On : 22 Nov 15 21:37
 Sample : 151117A LCS-1 1/30.05G
 Misc : soil

Quant Time: Nov 24 8:37 2015

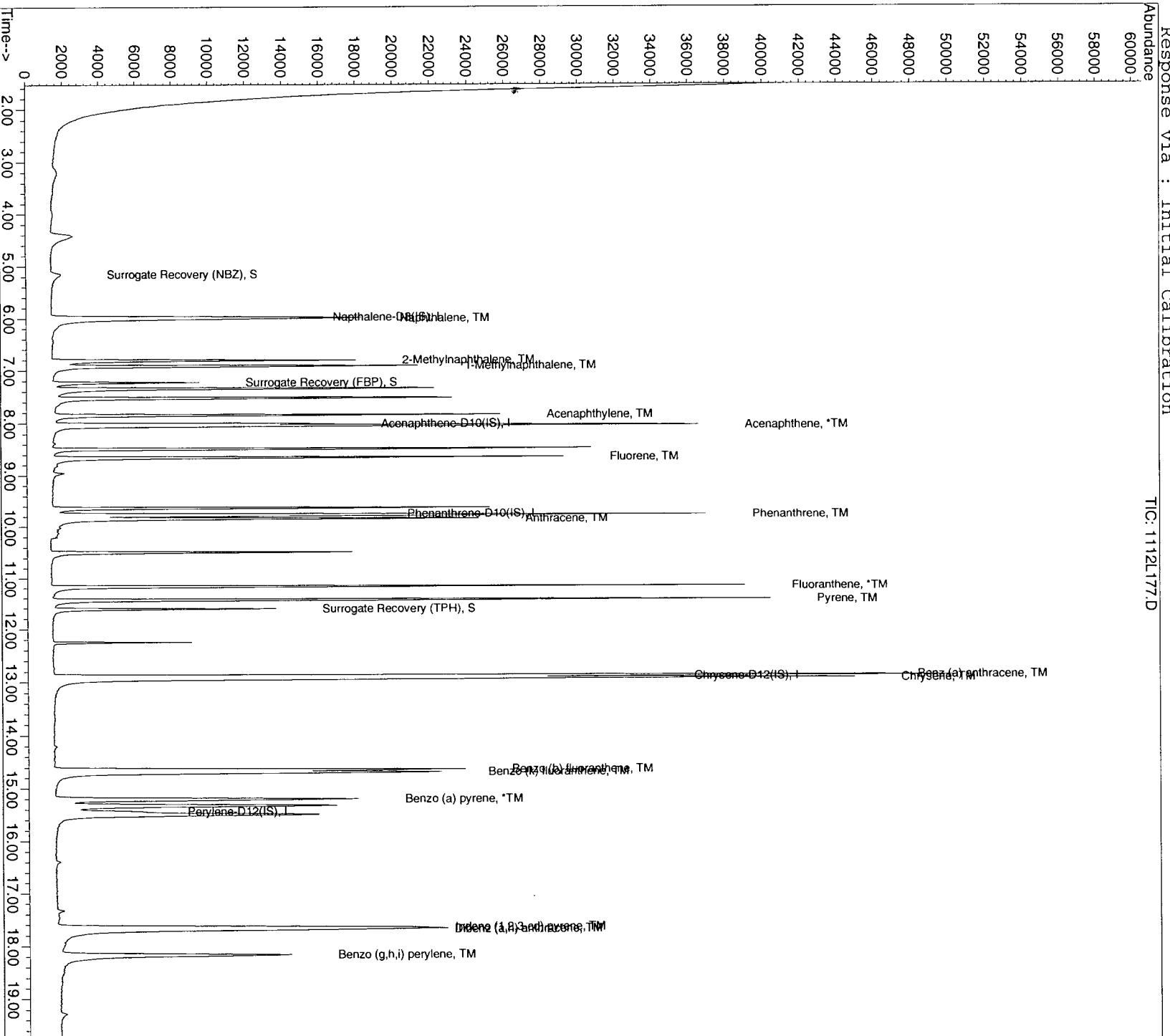
Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\1112L177.D (RTE Integrator)

Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration

TIC:1112L177.D

Vial: 77
 Operator: MA
 Inst : Linus
 Multiplr: 1.00



Matrix Spike Recoveries

EPA 8270D LL SOILS

APPL ID: **151117S-24401 MS - 202551**

Batch ID: #SIMDD-151117A

Sample ID: AZ24401

Client ID: S67-SS53-0006

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Lvl mg/kg	Matrix Result mg/kg	SPK Result mg/kg	DUP Result mg/kg	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-METHYLNAPHTHALENE	0.133	ND	0.119	0.136	89.5	102	45-105	13.3	30
ACENAPHTHENE	0.167	ND	0.143	0.166	85.6	99.4	45-110	14.9	30
ACENAPHTHYLENE	0.167	ND	0.145	0.162	86.8	97.0	45-105	11.1	30
ANTHRACENE	0.167	ND	0.138	0.158	82.6	94.6	55-105	13.5	30
BENZ (A) ANTHRACENE	0.167	0.0024	0.161	0.177	95.0	105	50-110	9.5	30
BENZO (A) PYRENE	0.167	0.0022	0.141	0.167	83.1	98.7	50-110	16.9	30
BENZO (B) FLUORANTHENE	0.167	ND	0.134	0.171	80.2	102	45-115	24.3	30
BENZO (G,H,I) PERYLENE	0.167	0.0073	0.115	0.176	64.5	101	40-125	41.9 #	30
BENZO (K) FLUORANTHENE	0.167	ND	0.150	0.161	89.8	96.4	45-125	7.1	30
CHRYSENE	0.167	0.0023	0.134	0.161	78.9	95.0	55-110	18.3	30
DIBENZ (A,H) ANTHRACENE	0.167	0.0019	0.122	0.177	71.9	105	40-125	36.8 #	30
FLUORANTHENE	0.167	0.0032	0.153	0.178	89.7	105	55-115	15.1	30
FLUORENE	0.167	ND	0.148	0.170	88.6	102	50-110	13.8	30
INDENO (1,2,3-CD) PYRENE	0.167	0.0035	0.108	0.170	62.6	99.7	40-120	44.6 #	30
NAPHTHALENE	0.167	ND	0.128	0.146	76.6	87.4	40-105	13.1	30
PHENANTHRENE	0.167	0.0014	0.144	0.171	85.4	102	50-110	17.1	30
PYRENE	0.167	0.0028	0.151	0.170	88.7	100	45-125	11.8	30
SURROGATE: 2-FLUORBIPHENYL (S)	0.083	NA	0.0626	0.0724	75.4	87.2	45-105		
SURROGATE: NITROBENZENE-D5 (S)	0.083	NA	0.0792	0.084	95.4	101 #	35-100		
SURROGATE: TERPHENYL-D14 (S)	0.083	NA	0.0669	0.0754	80.6	90.8	30-125		

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	P1112.M	P1112.M
Extraction Date :	11/17/2015	11/17/2015
Analysis Date :	11/23/2015	11/24/2015
Instrument :	Linus	Linus
Run :	1112L183	1112L197
Initials :	DA	

Printed: 11/25/2015 8:52:27 AM

APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L183.D Vial: 83
 Acq On : 23 Nov 15 00:23 Operator: MA
 Sample : AZ24401S03 MS-1 1/30.19G Inst : Linus
 Misc : soil Multiplr: 33.12

Quant Time: Nov 24 8:37 2015 Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8(IS)	5.97	136	19771	2.50	ppb	0.00
6) Acenaphthene-D10(IS)	8.01	164	9607	2.50	ppb	0.00
11) Phenanthrene-D10(IS)	9.75	188	15512	2.50	ppb	0.00
15) Chrysene-D12(IS)	12.90	240	19939	2.50	ppb	0.00
21) Perylene-D12(IS)	15.45	264	10320	2.50	ppb	0.00
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.14	82	3868	79.25	ppb	0.01
Spiked Amount	82.809		Recovery	=	95.696%	
7) Surrogate Recovery (FBP)	7.23	172	9376	62.61	ppb	0.00
Spiked Amount	82.809		Recovery	=	75.607%	
17) Surrogate Recovery (TPH)	11.61	244	12605	66.92	ppb	-0.01
Spiked Amount	82.809	<u>34065x2.5</u>	Recovery	=	80.816%	
			<u>19771 x 1.113 x 33.12</u>	<u>108.18</u>	<u>DA 11/28/15</u>	
Target Compounds						
3) Naphthalene	6.00	128	34065	128.24	ppb	99
4) 2-Methylnaphthalene	6.81	142	21561	118.93	ppb	100
5) 1-Methylnaphthalene	6.92	142	23158	130.71	ppb	100
8) Acenaphthylene	7.84	152	34435	144.66	ppb	98
9) Acenaphthene	8.05	154	20358	143.27	ppb	96
10) Fluorene	8.65	166	25480	147.65	ppb	99
12) Phenanthrene	9.77	178	34204	144.24	ppb	99
13) Anthracene	9.84	178	30117	137.83	ppb	98
14) Fluoranthene	11.17	202	51395	152.57	ppb	# 91
16) Pyrene	11.43	202	52722	151.09	ppb	95
18) Benz (a) anthracene	12.88	228	49971	160.52	ppb	98
19) Chrysene	12.94	228	41404	134.14	ppb	100
20) Indeno (1,2,3-cd) pyrene	17.65	276	33727	108.28	ppb	# 94
22) Benzo (b) fluoranthene	14.64	252	38025	133.58	ppb	99
23) Benzo (k) fluoranthene	14.69	252	34714	149.88	ppb	98
24) Benzo (a) pyrene	15.20	252	31359	140.76	ppb	97
25) Dibenz (a,h) anthracene	17.68	278	26252	121.59	ppb	95
26) Benzo (g,h,i) perylene	18.17	276	26618	115.23	ppb	96

Quantitation Report

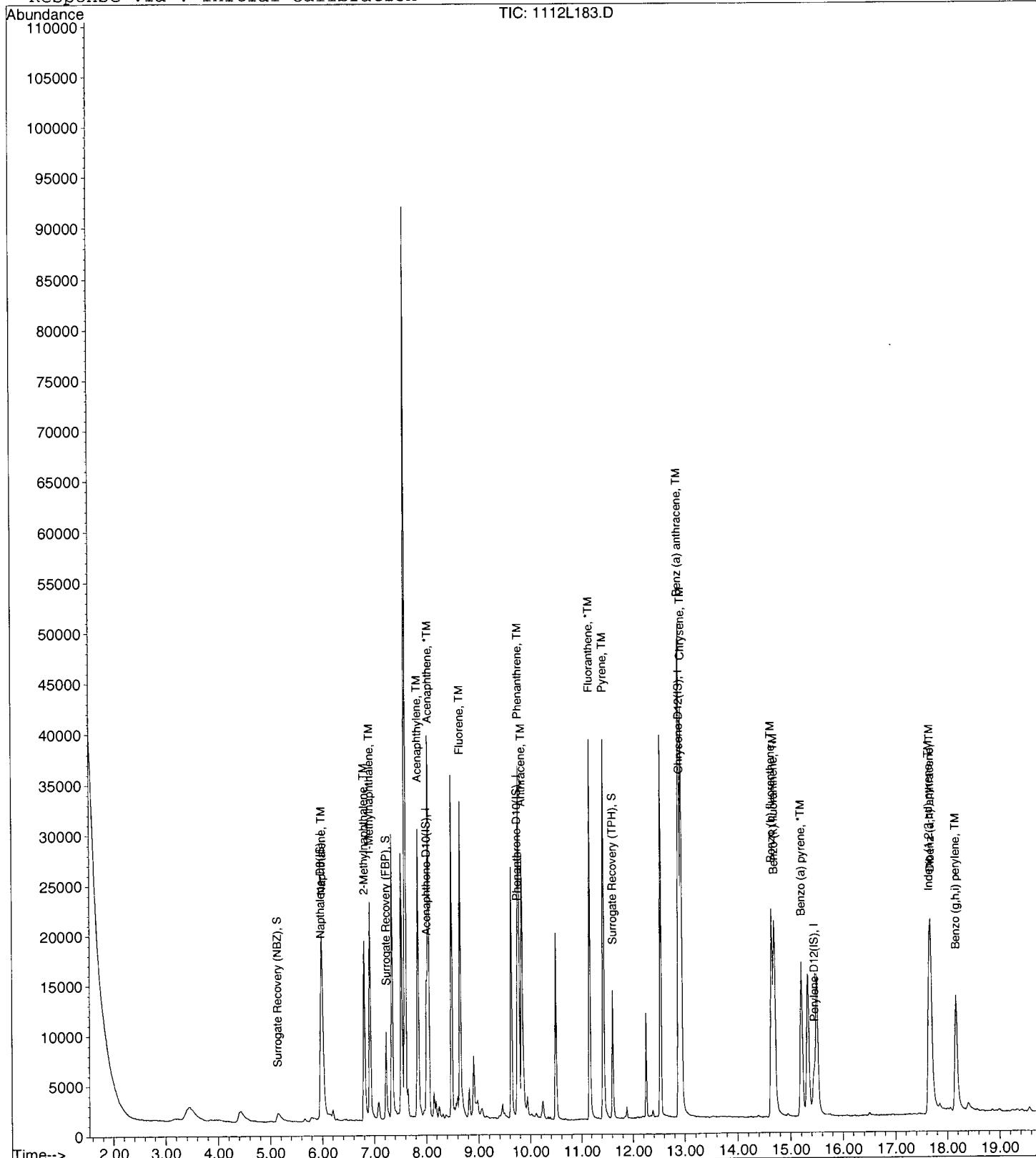
Data File : M:\LINUS\DATA\L151112\1112L183.D
 Acq On : 23 Nov 15 00:23
 Sample : AZ24401S03 MS-1 1/30.19G
 Misc : soil

Vial: 83
 Operator: MA
 Inst : Linus
 Multiplr: 33.12

Quant Time: Nov 24 8:37 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L151112\1112L184.D
 Acq On : 23 Nov 15 00:51
 Sample : AZ24401S03 MSD-1 1/30.04G DF10
 Misc : soil

Vial: 84
 Operator: MA
 Inst : Linus
 Multiplr: 332.89

Quant Time: Nov 24 8:37 2015

Quant Results File: P1112.RES

Quant Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270
 Last Update : Thu Nov 12 15:22:39 2015
 Response via : Initial Calibration
 DataAcq Meth : 87SIMAQA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Naphthalene-D8 (IS)	5.97	136	18688	2.50	ppb	0.00
6) Acenaphthene-D10 (IS)	8.01	164	9174	2.50	ppb	0.00
11) Phenanthrene-D10 (IS)	9.76	188	14673	2.50	ppb	0.01
15) Chrysene-D12 (IS)	12.90	240	19295	2.50	ppb	0.00
21) Perylene-D12 (IS)	15.46	264	9839	2.50	ppb	0.01

System Monitoring Compounds

2) Surrogate Recovery (NBZ)	5.09	82	7	361.76	ppb	-0.04
Spiked Amount	83.222		Recovery	=	434.687%	
7) Surrogate Recovery (FBP)	7.24	172	940	66.06	ppb	0.01
Spiked Amount	83.222		Recovery	=	79.378%	
17) Surrogate Recovery (TPH)	11.62	244	1336	73.66	ppb	0.00
Spiked Amount	83.222		Recovery	=	88.515%	

Target Compounds

3) Naphthalene	6.00	128	3814	152.66	ppb	98
4) 2-Methylnaphthalene	6.82	142	2084	83.50	ppb	98
5) 1-Methylnaphthalene	6.93	142	2773	166.42	ppb	98
8) Acenaphthylene	7.86	152	3636	160.75	ppb	97
9) Acenaphthene	8.05	154	2364	175.08	ppb	96
10) Fluorene	8.66	166	2662	162.34	ppb	100
12) Phenanthrene	9.79	178	3745	167.79	ppb	99
13) Anthracene	9.86	178	2716	132.06	ppb	98
14) Fluoranthene	11.18	202	5587	176.21	ppb	# 90
16) Pyrene	11.45	202	5721	170.26	ppb	95
18) Benz (a) anthracene	12.89	228	5130	171.14	ppb	97
19) Chrysene	12.94	228	5549	186.70	ppb	96
20) Indeno (1,2,3-cd) pyrene	17.66	276	5059	168.67	ppb	# 95
22) Benzo (b) fluoranthene	14.67	252	4551	126.85	ppb	97
23) Benzo (k) fluoranthene	14.71	252	2813	14.46	ppb	99
24) Benzo (a) pyrene	15.21	252	3692	174.69	ppb	94
25) Dibenz (a,h) anthracene	17.70	278	3554	173.52	ppb	96
26) Benzo (g,h,i) perylene	18.19	276	4625	211.05	ppb	91

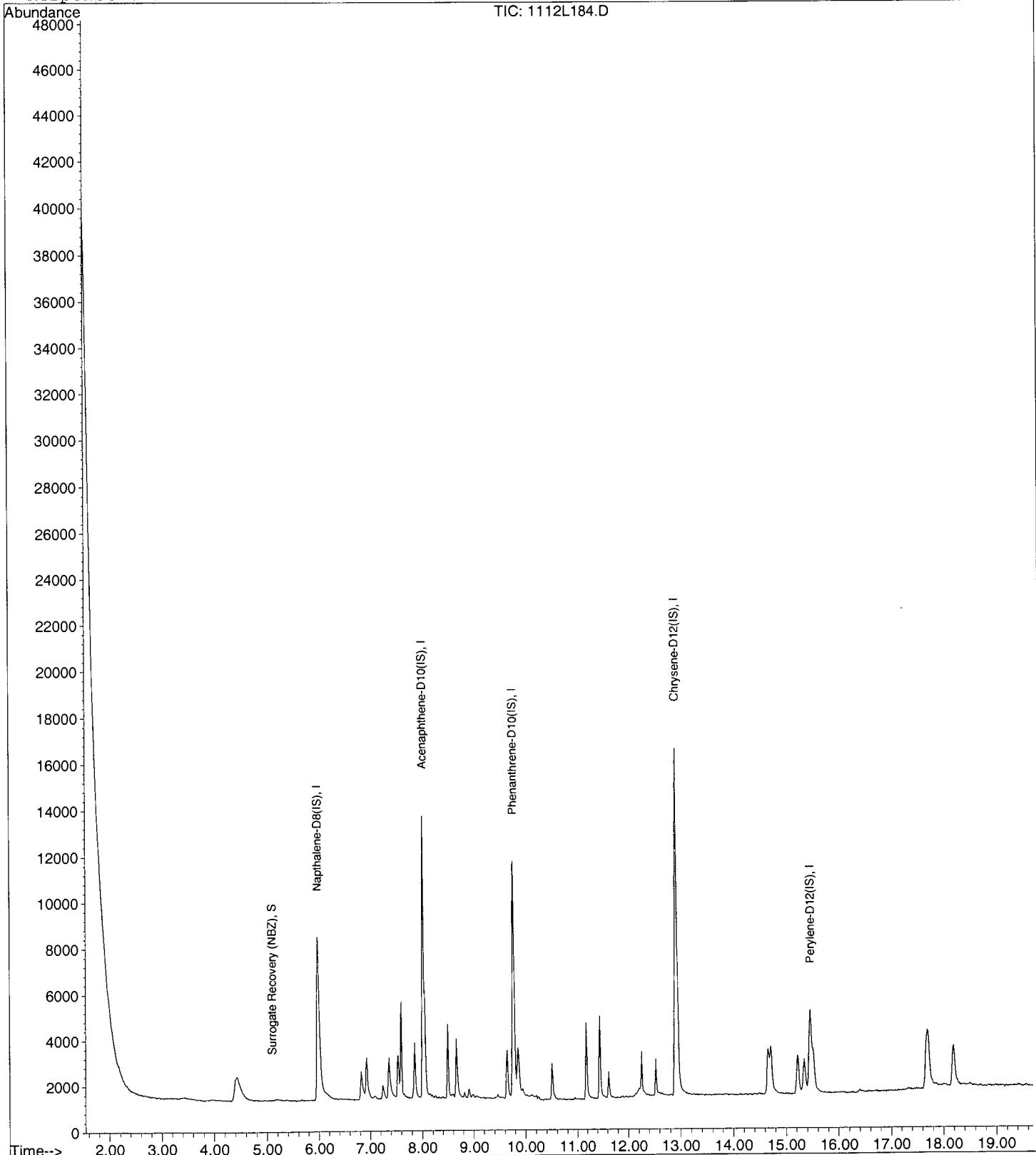
Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L184.D Vial: 84
Acq On : 23 Nov 15 00:51 Operator: MA
Sample : AZ24401S03 MSD-1 1/30.04G DF10 Inst : Linus
Misc : soil Multiplr: 332.89

Quant Time: Nov 24 8:37 2015

Quant Results File: P1112.RES

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Nov 12 15:22:39 2015
Response via : Initial Calibration

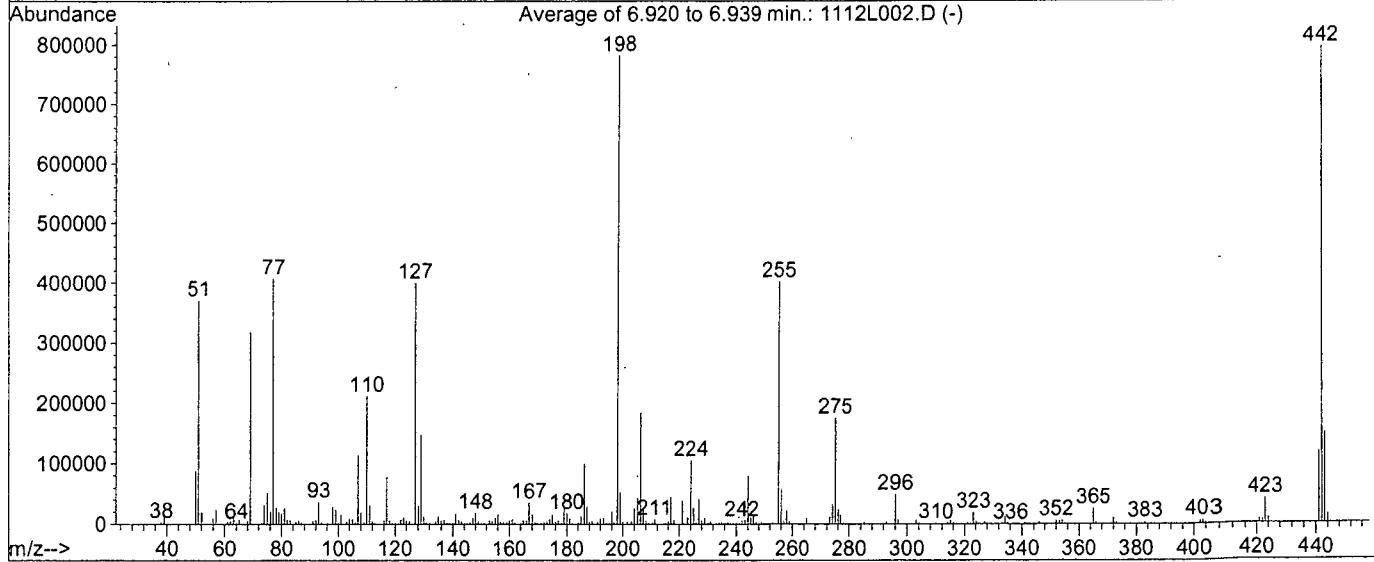
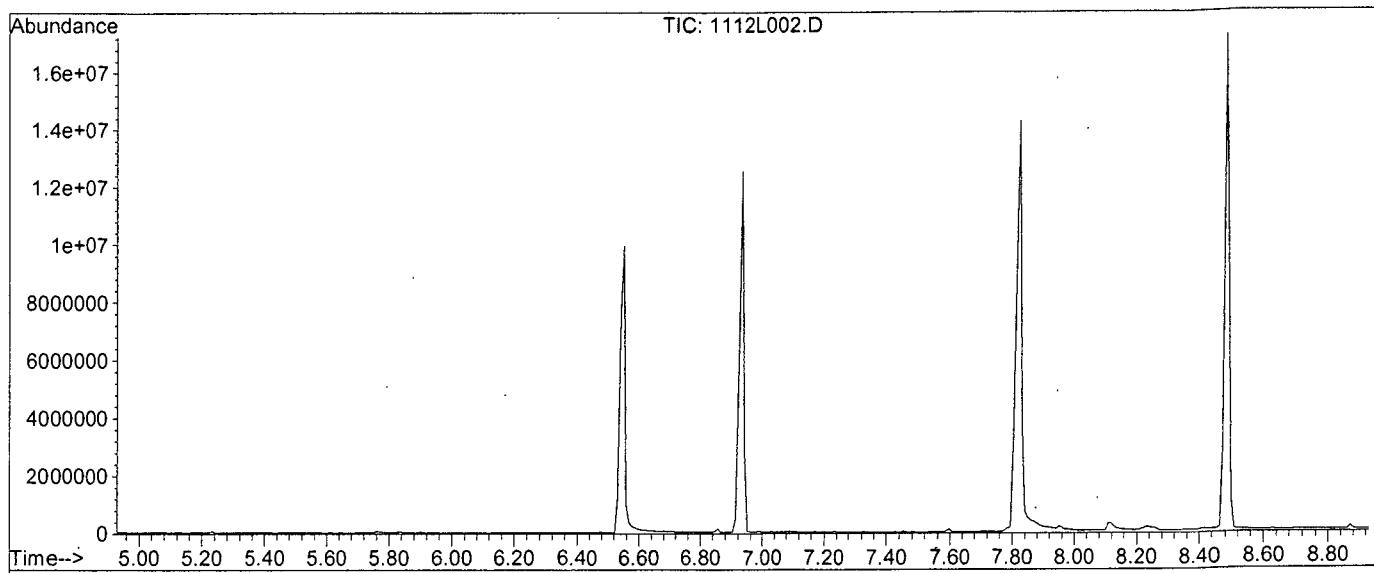


DFTPP

Data File : M:\LINUS\DATA\L151112\1112L002.D
 Acq On : 12 Nov 15 10:34
 Sample : SV Tune 08/14/15
 Misc :

Vial: 2
 Operator: MA
 Inst : Linus
 Multiplr: 1.00

Method : M:\LINUS\DATA\L151112\P1112.M (RTE Integrator)
 Title : EPA 8270



AutoFind: Scans 468, 469, 470; Background Corrected with Scan 465

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	47.4	370622	PASS
68	69	0.00	2	1.5	4681	PASS
70	69	0.00	2	0.5	1533	PASS
127	198	40	60	51.1	400003	PASS
197	198	0.00	1	0.4	2997	PASS
198	198	100	100	100.0	782208	PASS
199	198	5	9	6.6	51736	PASS
275	198	10	30	22.4	174917	PASS
365	198	1	100	3.2	24678	PASS
441	443	0.01	100	78.9	117352	PASS
442	198	50	150	101.3	792576	PASS
443	442	17	23	18.8	148771	PASS

M:\LINUS\DATA\L151112\1112L002.D

Data File Name: 1112L002.D
Data File Path: M:\LINUS\DATA\L151112\
Operator: MA
Date Acquired: 12 Nov 2015 10:34
Method File: DFTPP2.M
Sample Name: SV Tune 08/14/15
Vial Number: 2
Instrument Name: Linus

#	Name	Ret Time	Target Response
1)	DDT	8.49	157919000
2)	DDD	8.24	5008640
3)	DDE	8.24	665883

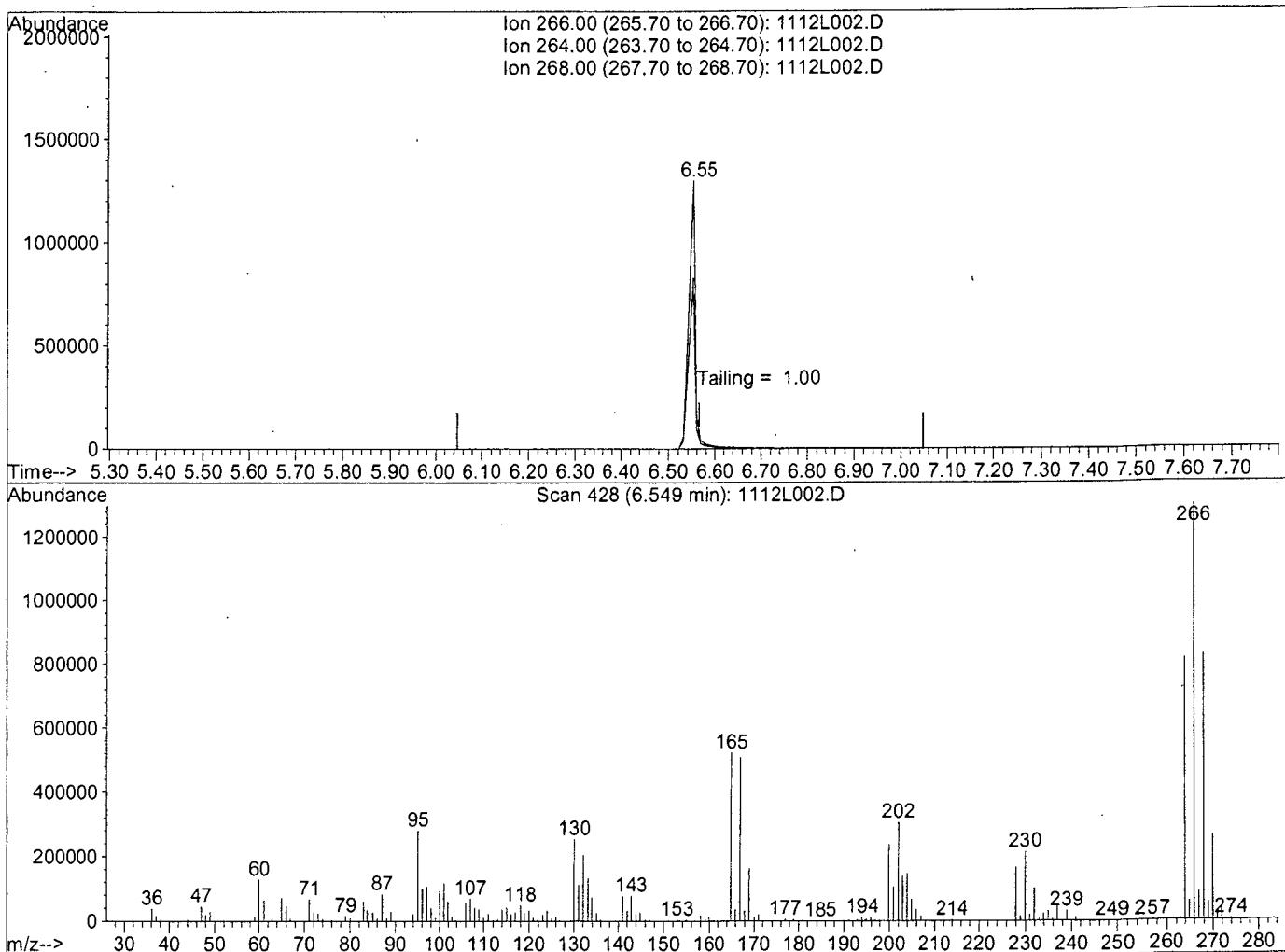
Breakdown **3.47**

Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L002.D
 Acq On : 12 Nov 15 10:34
 Sample : SV Tune 08/14/15
 Misc :
 Quant Time: Nov 12 10:57 2015

Vial: 2
 Operator: MA
 Inst : Linus
 Multiplr: 1.00
 Quant Results File: temp.res

Method : M:\LINUS\DATA\L151112\DFTPP2.M (Chemstation Integrator)
 Title :
 Last Update : Thu Nov 12 10:57:01 2015
 Response via : Single Level Calibration



TIC: 1112L002.D

(5) Pentachlorophenol

6.55min 0.0000

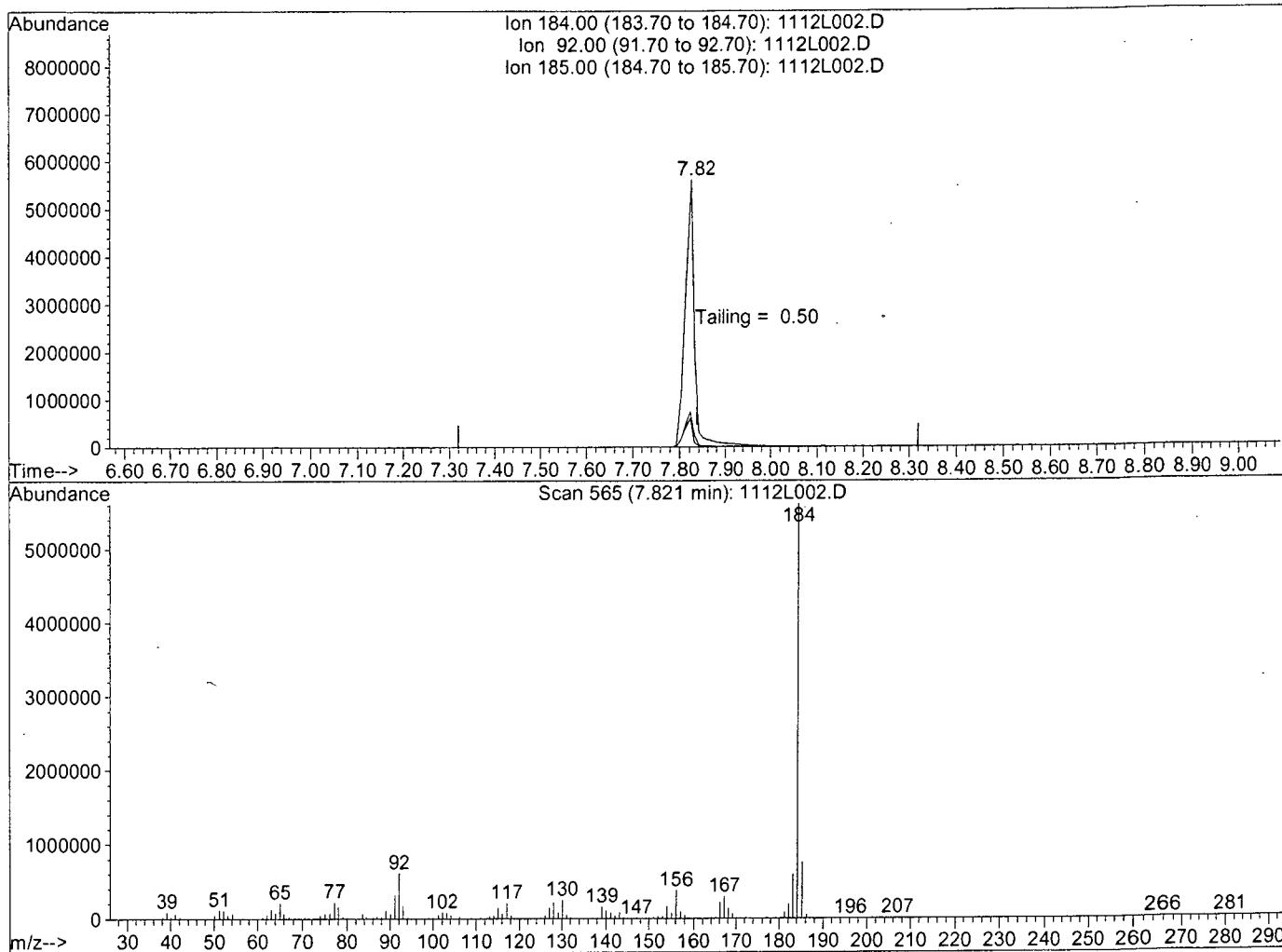
response 12910276

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	63.59
268.00	63.60	63.31
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L002.D Vial: 2
 Acq On : 12 Nov 15 10:34 Operator: MA
 Sample : SV Tune 08/14/15 Inst : Linus
 Misc : Multiplr: 1.00
 Quant Time: Nov 12 10:57 2015 Quant Results File: temp.res

Method : M:\LINUS\DATA\L151112\DFTPP2.M (Chemstation Integrator)
 Title :
 Last Update : Thu Nov 12 10:57:01 2015
 Response via : Single Level Calibration



TIC: 1112L002.D

(6) Benzidine

7.82min 0.0000

response 75807358

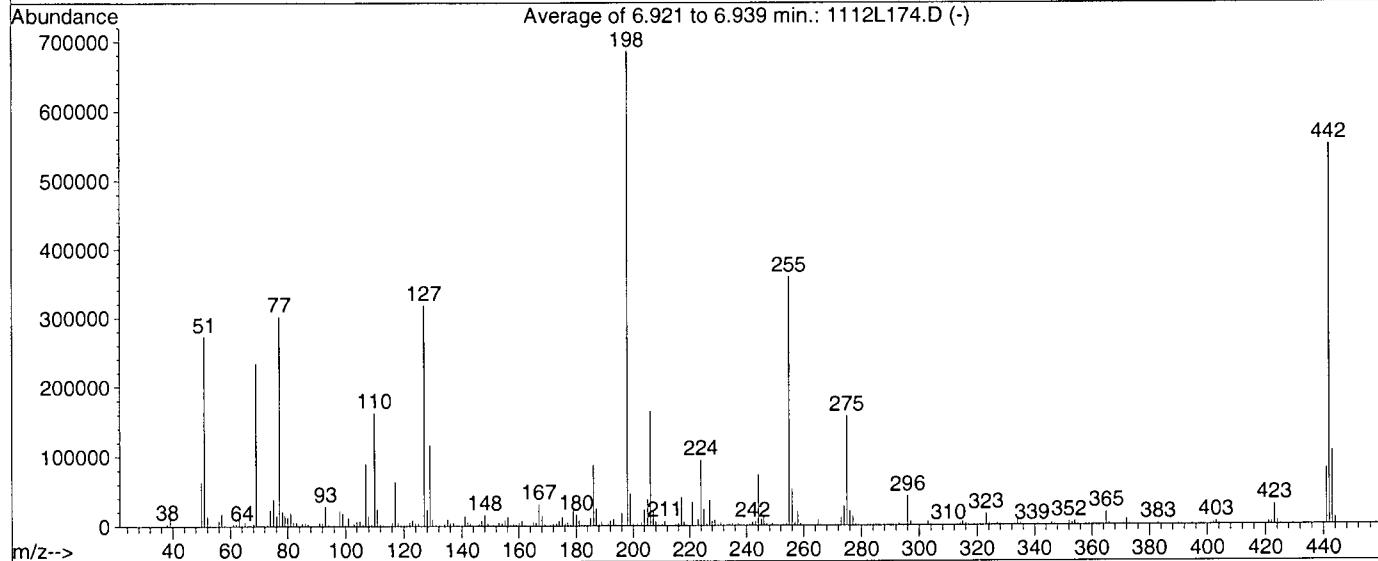
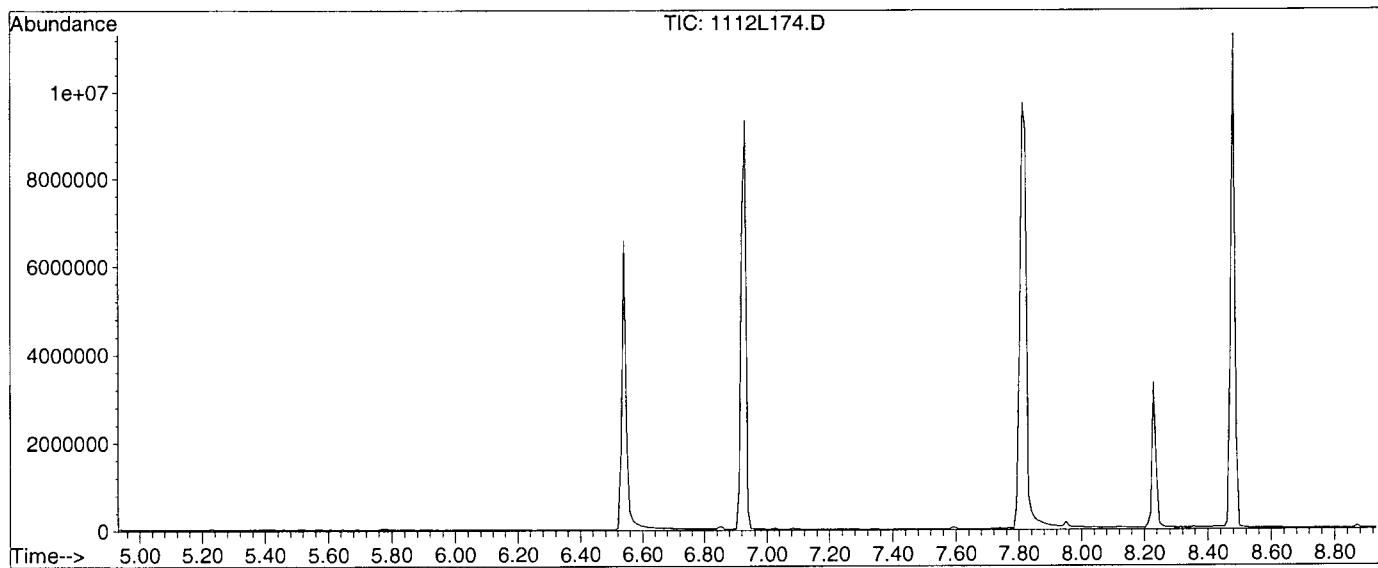
Ion	Exp%	Act%
184.00	100	100
92.00	10.90	10.30
185.00	13.40	13.52
0.00	0.00	0.00

DFTPP

Data File : M:\LINUS\DATA\L151112\1112L174.D
 Acq On : 22 Nov 15 20:25
 Sample : SV TUNE 11/16/15
 Misc : soil

Vial: 74
 Operator: MA
 Inst : Linus
 Multiplr: 1.00

Method : M:\LINUS\DATA\L151112\DFTPP2.M (Chemstation Integrator)
 Title :



AutoFind: Scans 468, 469, 470; Background Corrected with Scan 464

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	39.7	272348	PASS
68	69	0.00	2	1.4	3273	PASS
69	69	100	100	100.0	234025	PASS
70	69	0.00	2	0.6	1304	PASS
127	198	40	60	46.4	318001	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	686038	PASS
199	198	5	9	6.6	45298	PASS
275	198	10	30	22.9	156959	PASS
365	198	1	100	2.7	18225	PASS
441	443	0.01	100	76.5	80629	PASS
442	198	40	150	80.2	549931	PASS
443	442	17	23	19.2	105352	PASS

M:\LINUS\DATA\L151112\1112L174.D

Data File Name: **1112L174.D**
Data File Path: **M:\LINUS\DATA\L151112**
Operator: **MA**
Date Acquired: **22 Nov 2015 20:25**
Method File: **DFTPP2.M**
Sample Name: **SV TUNE 11/16/15**
Vial Number: **74**
Instrument Name: **Linus**

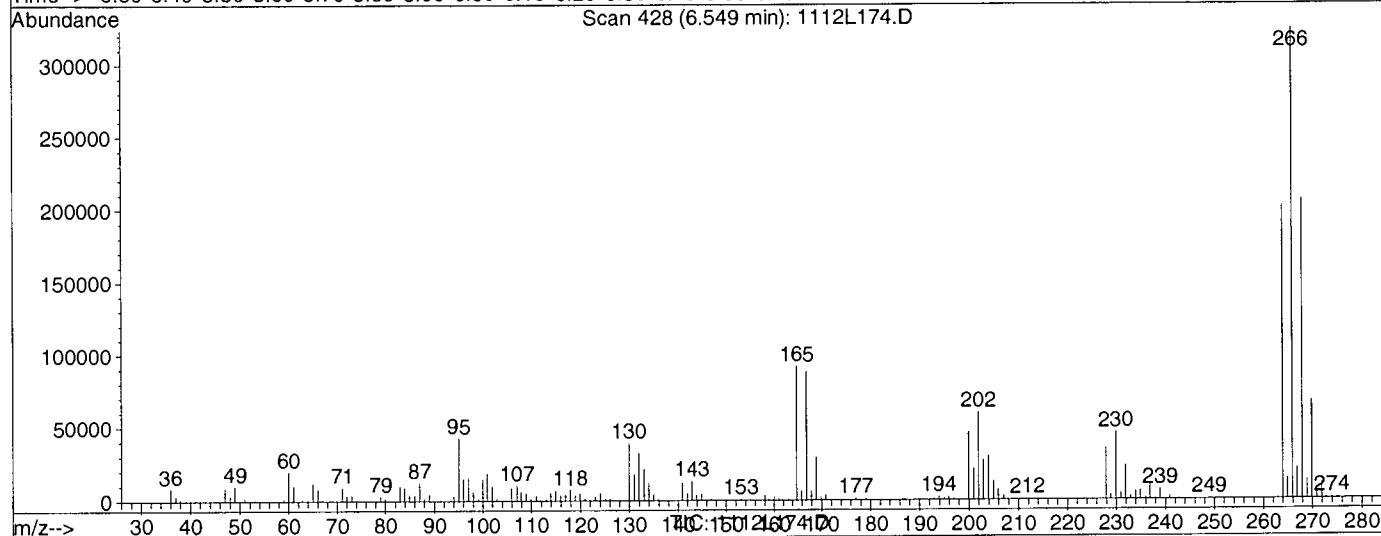
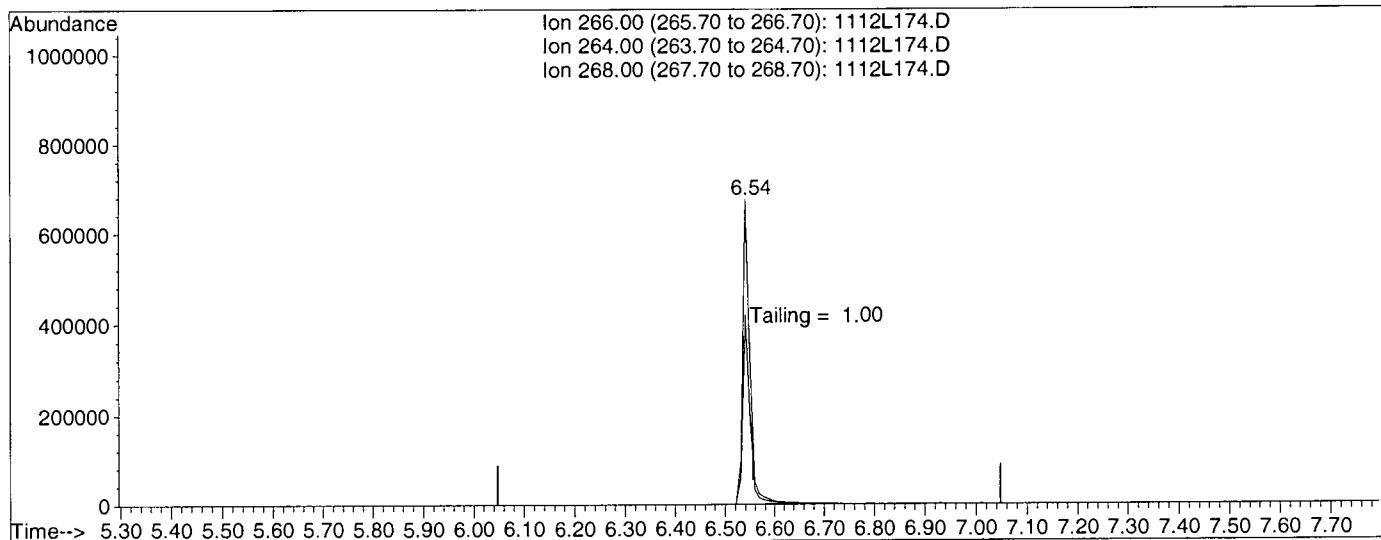
#	Name	Ret Time	Target Response
1)	DDT	8.49	102334000
2)	DDD	8.24	25290400
3)	DDE	8.24	0

Breakdown **19.82**

Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L174.D Vial: 74
 Acq On : 22 Nov 15 20:25 Operator: MA
 Sample : SV TUNE 11/16/15 Inst : Linus
 Misc : soil Multiplr: 1.00
 Quant Time: Nov 24 11:20 2015 Quant Results File: temp.res

Method : M:\LINUS\DATA\L151112\DFTPP2.M (Chemstation Integrator)
 Title :
 Last Update : Thu Nov 12 10:57:01 2015
 Response via : Single Level Calibration



(5) Pentachlorophenol

6.55min 0.0000

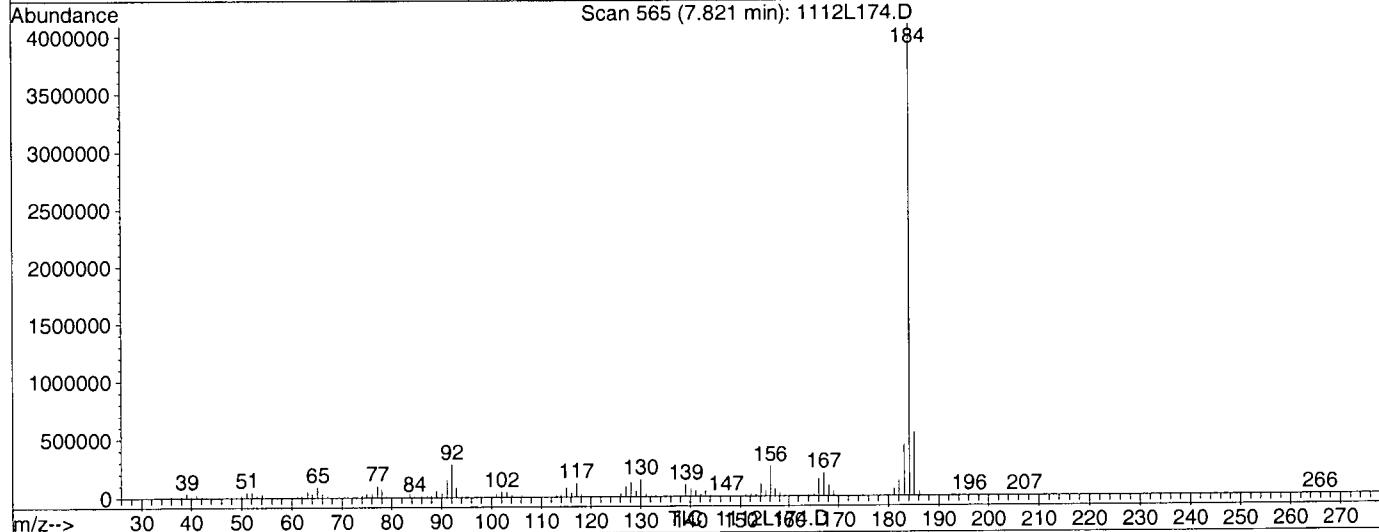
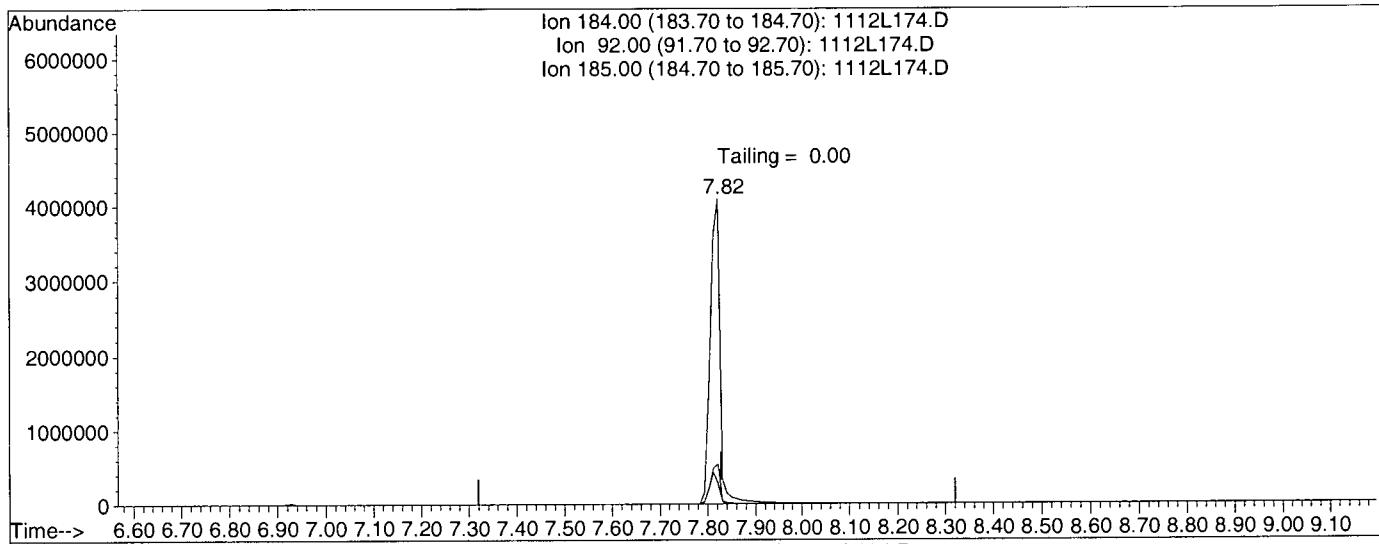
response 6929923

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	62.32
268.00	63.60	62.11
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L174.D Vial: 74
 Acq On : 22 Nov 15 20:25 Operator: MA
 Sample : SV TUNE 11/16/15 Inst : Linus
 Misc : soil Multiplr: 1.00
 Quant Time: Nov 24 11:20 2015 Quant Results File: temp.res

Method : M:\LINUS\DATA\L151112\DFTPP2.M (Chemstation Integrator)
 Title :
 Last Update : Thu Nov 12 10:57:01 2015
 Response via : Single Level Calibration



(6) Benzidine

7.82min 0.0000

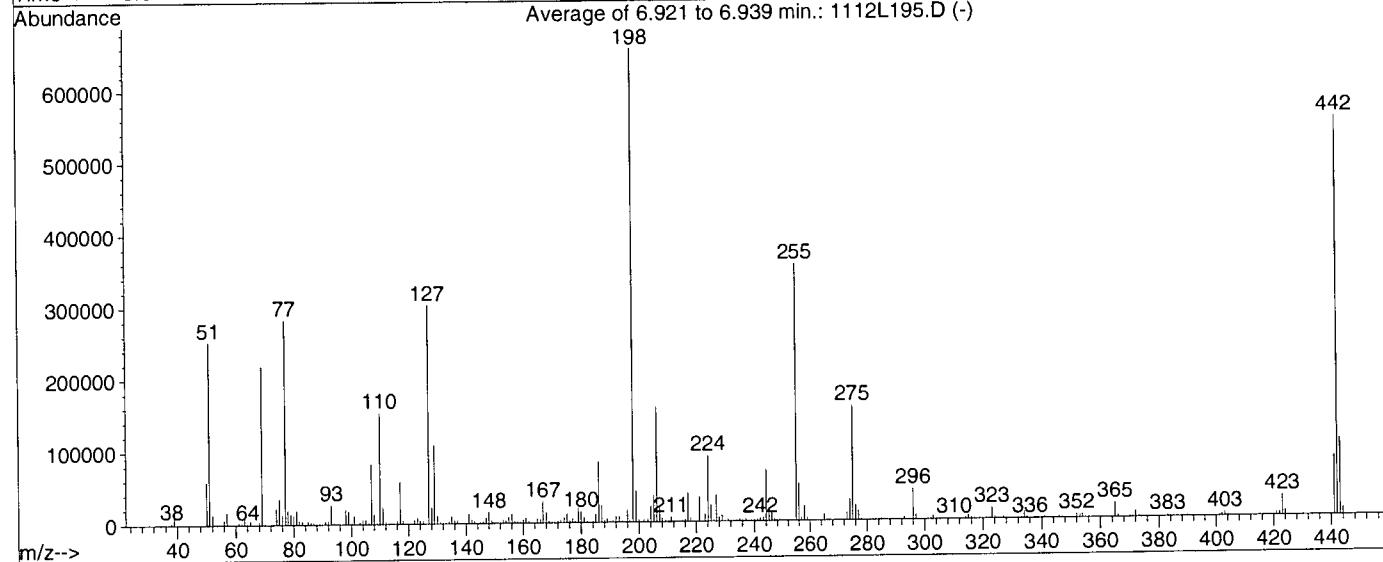
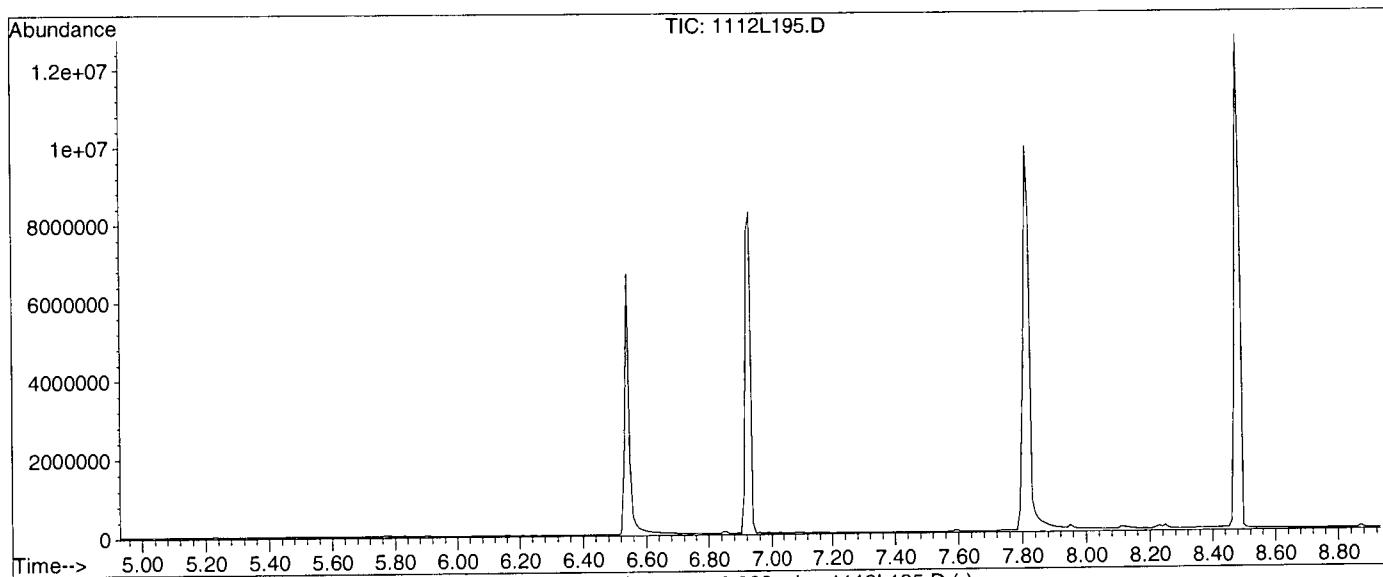
response 58469355

Ion	Exp%	Act%
184.00	100	100
92.00	10.90	9.79
185.00	13.40	13.32
0.00	0.00	0.00

DFTPP

Data File : M:\LINUS\DATA\L151112\1112L195.D Vial: 95
 Acq On : 24 Nov 15 12:16 Operator: MA
 Sample : SV TUNE 11/16/15 Inst : Linus
 Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L151112\DFTPP2.M (Chemstation Integrator)
 Title :



Spectrum Information: Average of 6.921 to 6.939 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	38.4	252436	PASS
68	69	0.00	2	1.6	3418	PASS
69	69	100	100	100.0	219708	PASS
70	69	0.00	2	0.6	1262	PASS
127	198	40	60	46.0	302532	PASS
197	198	0.00	1	0.2	1625	PASS
198	198	100	100	100.0	658002	PASS
199	198	5	9	6.6	43584	PASS
275	198	10	30	24.1	158802	PASS
365	198	1	100	3.0	19712	PASS
441	443	0.01	100	77.9	82741	PASS
442	198	40	150	84.1	553216	PASS
443	442	17	23	19.2	106280	PASS

M:\LINUS\DATA\L151112\1112L195.D

Data File Name: **1112L195.D**
Data File Path: **M:\LINUS\DATA\L151112**
Operator: **MA**
Date Acquired: **24 Nov 2015 12:16**
Method File: **DFTPP2.M**
Sample Name: **SV TUNE 11/16/15**
Vial Number: **95**
Instrument Name: **Linus**

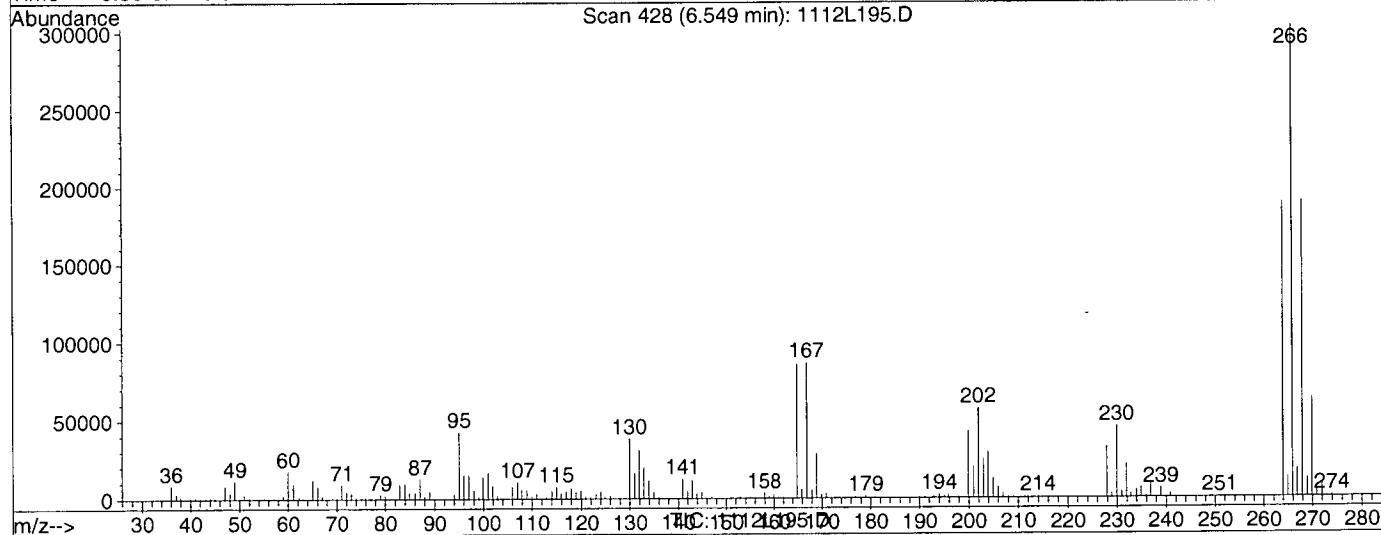
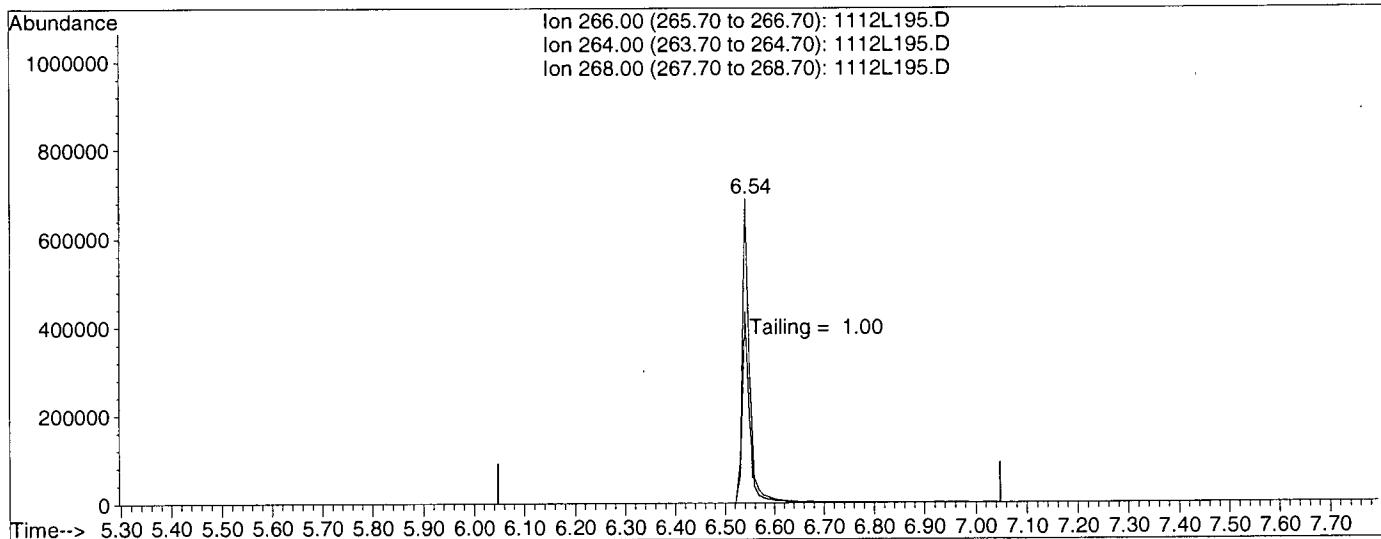
#	Name	Ret Time	Target Response
1)	DDT	8.49	141886000
2)	DDD	8.24	2387230
3)	DDE	8.24	0

Breakdown **1.65**

Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L195.D Vial: 95
 Acq On : 24 Nov 15 12:16 Operator: MA
 Sample : SV TUNE 11/16/15 Inst : Linus
 Misc : Multiplr: 1.00
 Quant Time: Nov 24 17:51 2015 Quant Results File: temp.res

Method : M:\LINUS\DATA\L151112\DFTPP2.M (Chemstation Integrator)
 Title :
 Last Update : Thu Nov 12 10:57:01 2015
 Response via : Single Level Calibration



(5) Pentachlorophenol

6.55min 0.0000

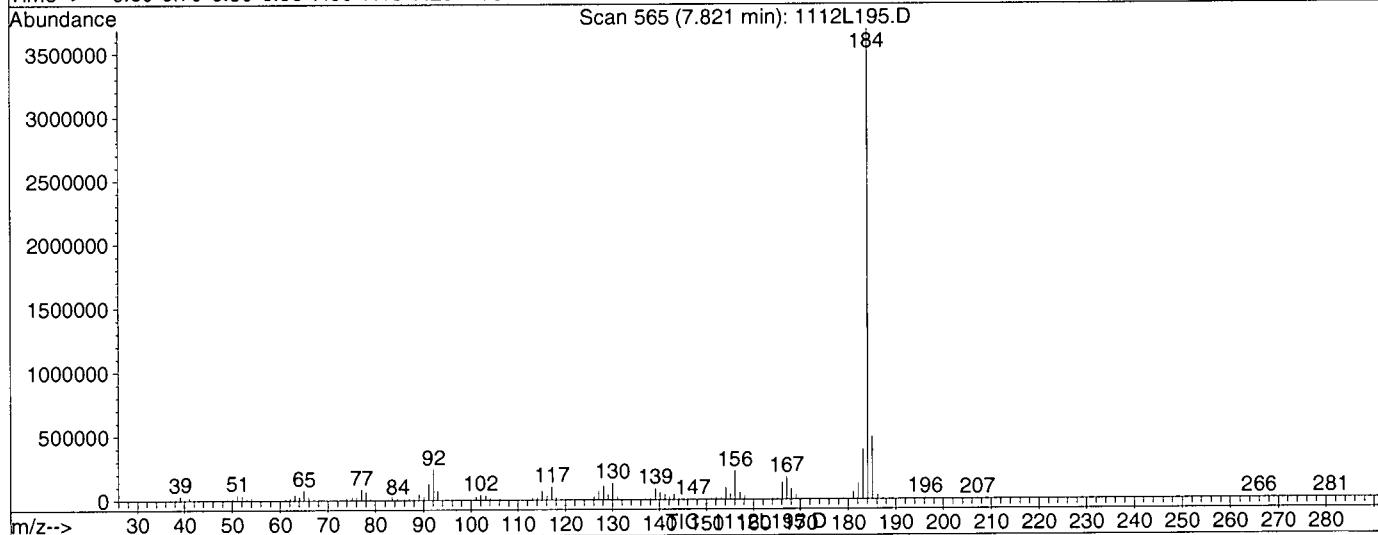
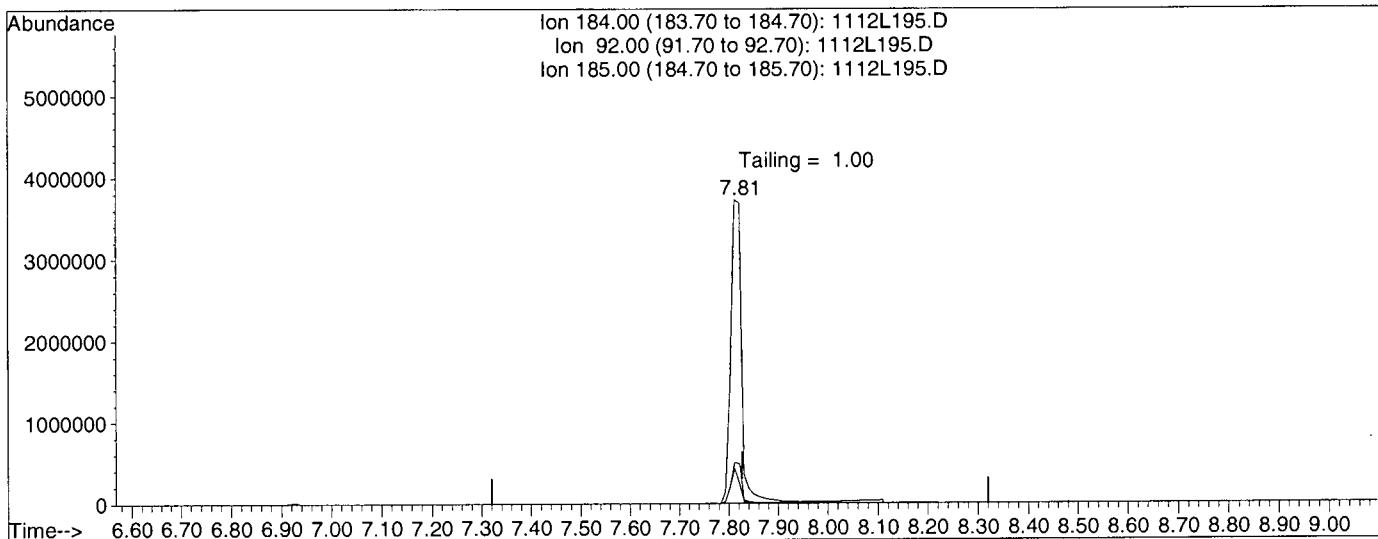
response 7061885

Ion	Exp%	Act%
266.00	100	100
264.00	62.70	62.73
268.00	63.60	61.68
0.00	0.00	0.00

Quantitation Report

Data File : M:\LINUS\DATA\L151112\1112L195.D Vial: 95
 Acq On : 24 Nov 15 12:16 Operator: MA
 Sample : SV TUNE 11/16/15 Inst : Linus
 Misc : Multiplr: 1.00
 Quant Time: Nov 24 17:51 2015 Quant Results File: temp.res

Method : M:\LINUS\DATA\L151112\DFTPP2.M (Chemstation Integrator)
 Title :
 Last Update : Thu Nov 12 10:57:01 2015
 Response via : Single Level Calibration



(6) Benzidine

7.82min 0.0000

response 56984186

Ion	Exp%	Act%
184.00	100	100
92.00	10.90	9.44
185.00	13.40	13.48
0.00	0.00	0.00

MOTOR OIL CCV 1000ppm

Prep: 11/12/15-L.H. Ex: 05/12/16

STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT /LOT#
MO STD.	2000 µg/mL	MO Std.	2500µL	5mL	1000 µg/ml	MC
	PREP:	8/27/2015				55006
	Exp:	8/27/2016				

8270 PAH SIM Standard Curve

PREP DATE:	11/12/15-L.H.											
8270 PAH SIM STANDARD CURVE												
Exp. DATE:	12/1/15				0.1	0.2	0.5	1	5	10	50	100
		Conc.		Date								
Supplier	ID #	µg/mL	Lot #	Code	Exp. Date	µL	µL	µL	µL	µL	µL	µL
o2si	8270 PAH SIM Stock	200	230271-34569	6/18/2015	06/18/16	0	0	0	5	5	25	50
	5.0ug/mL	5		11/12/15	12/1/15	0	0	10	20	0	0	0
	1.0ug/mL	1		11/12/15	12/1/15	10	20	0	0	0	0	0
O2si	8270 BN:A Surrogate	200/400	248285-35790	11/09/15	11/09/16	0	0	0	5	5	25	50
EM Science	Methylene Chloride		55006		Dec-25	90	80	90	80	190	90	50
Supelco	SIM SV Internal Stand	125	A10079V-3449	6/1/2015	12/1/15	2	2	2	4	2	2	2
				Final Vol.		102	102	102	204	102	102	102

8270 PAH SIM SS

PREP DATE:	11/12/15-L.H.					
8270 PAH SIM Second Source 5µg/mL						
Exp. DATE:	12/01/15					5
		Conc.		Date	Exp.	
Supplier	ID #	µg/mL	Lot #	Code	Date	µL
o2si	110780-01-SS	200	243842-34615	8/27/15	02/27/16	5
EM Science	Methylene Chloride		55006		12/01/25	195
Supelco	SIM SV Internal Stand	125	A10079V-3449	6/1/2015	12/01/15	4
				Final Vol.		204

8270 PAH SIM CCV

PREP DATE: 11/22/15-L.H.

8270 PAH SIM Continuing Calibration Verification 5ug/ml

Exp. DATE:	12/1/15	Conc.	Date	Exp.	<u>5</u>
Supplier	ID #	µg/mL	Lot #	Code	Date
o2si	8270 PAH SIM	200	230271-34569	06/18/15	6/18/16
O2si	8270 BN:A	200/400	248285-35648	10/13/15	10/13/16
EM Science	Methylene Chloride	55006		11/06/14	190
Supelco	SIM SV Inter	125	A10079V-3449	06/01/15	12/1/15
				Final Vol.	204

SON009S

Organic Extraction Worksheet

Method	SIM Sonication Ext. Methylenediphthalate c 3550	Extraction Set	151117A	Extraction Method	SON009S	Units	mL
Spiked ID 1	SIM Spike 11-14-15 EXP 11-14-16		Surrogate ID 1	SIM Surrogate 10-27-15 EXP 10-27-16			
Spiked ID 2			Surrogate ID 2				
Spiked ID 3			Surrogate ID 3				
Spiked ID 4			Surrogate ID 4				
Spiked ID 5			Surrogate ID 5				
Spiked ID 6			Sufficient Vol for Matrix QC:	YES			
Spiked ID 7			Ext. Start Time:	11/17/15 12:50			
Spiked ID 8			Ext. End Time:	11/21/15 12:50			
			GC Requires Extract By:	12/02/15 0:00			
		pH1				Water Bath Temp Criteria	73 °C
		pH2					
		pH3					

Spiked By: IC

Date 11/17/15

Witnessed By: DL

Date 11/17/15

Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1151117A-Blk				0.0250	1	30.01g	1	NA	11/17/15 12:50	
					equip	e-s5 E-WB7				
2151117A LCS-1		0.0250	1	0.0250	1	30.05g	1	NA	11/17/15 12:50	
					equip	E-S4 E-WB7				
3AZ24396	AZ24396S02			0.0250	1	30.43g	1	NA	11/17/15 12:50	77838
					equip	E-S3.1 E-WB7				
4AZ24397	AZ24397S01			0.0250	1	30.38g	1	NA	11/17/15 12:50	77838
					equip	E-S2 E-WB7				
5AZ24398	AZ24398S02			0.0250	1	30.44g	1	NA	11/17/15 12:50	77838
					equip	E-S1.2 E-WB7				
6AZ24399	AZ24399S02			0.0250	1	30.07g	1	NA	11/17/15 12:50	77838
					equip	E-S1.1 E-WB7				
7AZ24400	AZ24400S02			0.0250	1	30.08g	1	NA	11/17/15 12:50	77838
					equip	E-S6 E-WB7				
8AZ24401 MS-I	AZ24401S03	0.0250	1	0.0250	1	30.19g	1	NA	11/17/15 12:50	77838
					equip	E-S7 E-WB7				
9AZ24401 MSD-1	AZ24401S03	0.0250	1	0.0250	1	30.04g	1	NA	11/17/15 12:50	77838
					equip	E-S5 E-WB7				
0AZ24401	AZ24401S03			0.0250	1	30.30g	1	NA	11/17/15 12:50	77838
					equip	E-S4 E-WB7				

Kes 11/21/15

Content and Lot#	
ND	WL05A
C	55097
er Paper	9638018
Na2SO4	XE21G

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	LH
Date	11/22/15
Time	8:41
Refrigerator	BGC

Scanned By	DC
Sample Preparation	DC
Extraction	IC
Concentration	IC
Modified	11/21/15 12:54:43 PM

Reviewed By:

Kes 256 Date 11/21/15

Injection Log

Directory: M:\LINUSDATA\L151112

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1112L002.D	1	SV Tune 08/14/15		11/12/2015 10:34
2	3	1112L003.D	1	0.1ug/ml PAH 11/12/15		11/12/2015 11:05
3	4	1112L004.D	1	0.2ug/ml PAH 11/12/15		11/12/2015 11:32
4	5	1112L005.D	1	0.5ug/ml PAH 11/12/15		11/12/2015 12:00
5	6	1112L006.D	1	1.0ug/ml PAH 11/12/15		11/12/2015 12:28
6	7	1112L007.D	1	5.0ug/ml PAH 11/12/15		11/12/2015 12:56
7	8	1112L008.D	1	10ug/ml PAH 11/12/15		11/12/2015 13:24
8	9	1112L009.D	1	50ug/ml PAH 11/12/15		11/12/2015 13:51
9	10	1112L010.D	1	100ug/ml PAH 11/12/15		11/12/2015 14:19
10	11	1112L011.D	1	5.0ug/ml PAH SS 11/12/15		11/12/2015 15:20
11	74	1112L174.D	1	SV TUNE 11/16/15	soil	11/22/2015 20:25
12	75	1112L175.D	1	CCV: 5.0ug/ml PAH 11/22/15	soil	11/22/2015 20:42
13	76	1112L176.D	1	151117A BLK 1/30.01G	soil	11/22/2015 21:10
14	77	1112L177.D	33.2779	151117A LCS-1 1/30.05G	soil	11/22/2015 21:37
15	78	1112L178.D	32.8623	AZ24396S02 1/30.43G	soil	11/22/2015 22:05
16	79	1112L179.D	32.9164	AZ24397S01 1/30.38G	soil	11/22/2015 22:33
17	80	1112L180.D	32.8515	AZ24398S02 1/30.44G	soil	11/22/2015 23:01
18	81	1112L181.D	332.557	AZ24399S02 1/30.07G DF10	soil	11/22/2015 23:28
19	82	1112L182.D	33.2447	AZ24400S02 1/30.08G	soil	11/22/2015 23:56
20	83	1112L183.D	33.1236	AZ24401S03 MS-1 1/30.19G	soil	11/23/2015 00:23
21	85	1112L185.D	33.0033	AZ24401S03 1/30.30G	soil	11/23/2015 01:19
22	95	1112L195.D	1	SV TUNE 11/16/15		11/24/2015 12:16
23	96	1112L196.D	1	CCV: 5.0ug/ml PAH 11/22/15	soil	11/24/2015 12:33
24	97	1112L197.D	33.2889	AZ24401S03 MSD-1 1/30.04G	SOIL	11/24/2015 13:31

**EPA METHOD 6850
Perchlorate
LC/MS**

APPL, INC.

**EPA METHOD 6850
Perchlorate
LC/MS**

QC Summary



Method Blank
PERCHLORATE EPA 6850 - SOIL

Blank Name/QCG: **151119S-24401 - 202876**
Batch ID: #6850SM-151119A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLMFL2
Run #: TY21_007.d
Instrument: AGIL_6460
Sequence: TQ112115
Initials: RP

GC SC-Blank-REG MDLs-DOD
Printed: 12/07/15 8:22:47 AM

**Laboratory Control Spike Recovery
PERCHLORATE EPA 6850 - SOIL**

APPL ID: **151119S-24401 LCS - 202876**

Batch ID: #6850SM-151119A

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Level mg/Kg	SPK Result mg/Kg	SPK % Recovery	Recovery Limits
PERCHLORATE	0.00594	0.00501	84.3	80-120

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	QTLMFL2
Extraction Date :	11/19/15
Analysis Date :	11/21/15
Instrument :	AGIL_6460
Run :	TY21_005.d
Initials :	RP

Printed: 12/07/15 8:22:39 AM
APPL Standard LCS

Matrix Spike Recoveries
PERCHLORATE EPA 6850 - SOIL

APPL ID: **151119S-24401 MS - 202876**

APPL Inc.

Batch ID: #6850SM-151119A

908 North Temperance Avenue

Sample ID: AZ24401

Clovis, CA 93611

Client ID: S67-SS53-0006

Compound Name	SPK Lvl	DUP Lvl	Matrix	SPK	DUP	SPK %	DUP %	Recovery	RPD	RPD
	mg/Kg	mg/Kg	mg/Kg	Result	Result	Result	Recovery	Recovery	Limits	%	Limits

(Solid Concentrations have been adjusted to reflect 18.6 Percent Moisture.)

PERCHLORATE	0.00326	0.00321	ND	0.00252	0.0023	77.3 #	71.7 #	80-120	7.5	15
-------------	---------	---------	----	---------	--------	--------	--------	--------	-----	----

= Recovery is outside QC limits.

Comments: _____

Primary	SPK	DUP
Quant Method :	QTLMFL2	QTLMFL2
Extraction Date :	11/19/15	11/19/15
Analysis Date :	11/21/15	11/21/15
Instrument :	AGIL_6460	AGIL_6460
Run :	TY21_018.d	TY21_019.d
Initials :		RP

Printed: 12/07/15 8:22:31 AM

APPL MSD SCII

EPA 6850

Form 4

Blank Summary

Lab Name: APPL, Inc.
Case No: 77838
Matrix: SOIL
Blank ID: 151119A-BLK

SDG No: 77838
Date Analyzed: 11/21/15
Instrument: AGIL_6460
Time Analyzed: 1520

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151119A-LCS	Lab Control Spike	TY21_005.d	11/21/15 1430
151119A-BLK	Blank	TY21_007.d	11/21/15 1520
AZ24396	S67-SS50-0006	TY21_008.d	11/21/15 1538
AZ24397	S67-SS50-0006P	TY21_009.d	11/21/15 1557
AZ24398	S67-SB50-1618	TY21_010.d	11/21/15 1615
AZ24399	S67-SS51-0006	TY21_015.d	11/21/15 1749
AZ24400	S67-SS52-0006	TY21_016.d	11/21/15 1807
AZ24401	S67-SS53-0006	TY21_017.d	11/21/15 1826
151119A-MS	Matrix Spike	TY21_018.d	11/21/15 1844
151119A-MSD	Matrix SpikeD	TY21_019.d	11/21/15 1903

Comments: Batch: #6850SM-151119A

Printed: 12/07/15 8:22:22 AM
Form 4, Blank Summary

Interference Check Sample

Perchlorate EPA 6850 Soil

APPL ID: 151119S-24401 ICS - 202876

Batch ID: #6850SM-151119A

APPL Inc.
908 N. Temperance Ave.
Clovis, CA 93711

Compound Name	Spike Level mg/Kg	Spk Result mg/Kg	SPK% Recovery	Recovery Limits
Perchlorate	0.00583	0.00508	87.1%	70-130

Comments:

Quant Method:	QTLMFL2
Extraction Date:	11/19/15
Analysis Date:	11/21/15
Instrument:	AGIL_6560
Run:	TY21_006.D
Initials:	RP

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc.

SDG No.

77838

Lab File ID (Standard): TY17_003 - 008.d

Instrument ID: Agilent 6460 Triple Quad LC/MS

AREA UPPER LIMIT = +50% of internal standard average

AREA LOWER LIMIT = -50% of internal standard average

Column used to flag values outside QC limits

* Values outside of QC limits

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc.

SDG No.

77838

Lab File ID (Standard): TY21_003.d

Instrument ID: Agilent 6460 Triple Quad LC/MS

AREA UPPER LIMIT = +50% of internal standard average

AREA LOWER LIMIT = -50% of internal standard average

Column used to flag values outside QC limits

* Values outside of QC limits

Perchlorate LC/MS Ion Ratio Report

acceptable ratio is between 2.3 and 3.8 (DoD Perchlorate Handbook, 2006)

Data File Path : D:\masshunter\data\151117
Instrument Name : TQ (Agilent 6460 Triple Quad LC/MS)
Method File : 6460_ESI_PER_N_NEWER_K'_COLUMN.m
Operator : BA

Date Aquired: 11/17/15 17:31 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 11/07/15 Data File ID: TY17_001.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.179	5512	0.6
2)	Perchlorate_85	11.921	8783	

Date Aquired: 11/17/15 17:50 Vial Number: NA
Sample Name: PERCHLORATE 0.0001 ug/ml 11/07/15 Data File ID: TY17_002.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	11.924	59466	1.9
2)	Perchlorate_85	11.921	31231	

Date Aquired: 11/17/15 18:09 Vial Number: NA
Sample Name: PERCHLORATE 0.0002 ug/ml 11/07/15 Data File ID: TY17_003.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	11.924	121718	2.6
2)	Perchlorate_85	11.911	46290	

Date Aquired: 11/17/15 18:27 Vial Number: NA
Sample Name: PERCHLORATE 0.0004 ug/ml 11/07/15 Data File ID: TY17_004.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.016	261401	2.9
2)	Perchlorate_85	12.023	89397	

Date Aquired: 11/17/15 18:46 Vial Number: NA
Sample Name: PERCHLORATE 0.001 ug/ml 11/07/15 Data File ID: TY17_005.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.098	692408	3.1
2)	Perchlorate_85	12.064	226804	

Date Aquired: 11/17/15 19:05 Vial Number: NA
Sample Name: PERCHLORATE 0.002 ug/ml 11/07/15 Data File ID: TY17_006.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.138	. 1411824	3.3
2)	Perchlorate_85	12.125	426802	

Date Aquired: 11/17/15 19:23 Vial Number: NA
Sample Name: PERCHLORATE 0.005 ug/ml 11/07/15 Data File ID: TY17_007.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.159	3772406	3.4
2)	Perchlorate_85	12.166	1109296	

Date Aquired: 11/17/15 19:42 Vial Number: NA
Sample Name: PERCHLORATE 0.010 ug/ml 08/01/15 Data File ID: TY17_008.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.169	8100882	3.4
2)	Perchlorate_85	12.166	2385247	

Date Aquired: 11/17/15 20:00 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 11/07/15 Data File ID: TY17_009.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.098	25307	13.4
2)	Perchlorate_85	12.074	1885	

Date Aquired: 11/17/15 20:19 Vial Number: NA
Sample Name: PER_SS 0.0004 ug/ml 11/06/15 Data File ID: TY17_010.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.281	301652	3.0
2)	Perchlorate_85	12.318	99865	

Date Aquired: 11/17/15 20:38 Vial Number: NA
Sample Name: PER_SS 0.002 ug/ml 11/06/15 Data File ID: TY17_011.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.301	1635975	3.1
2)	Perchlorate_85	12.329	519891	

Date Aquired: 11/17/15 20:56 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 11/07/15 Data File ID: TY17_012.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.087	3295	0.6
2)	Perchlorate_85	12.125	5303	

Date Aquired: 11/17/15 21:15 Vial Number: NA
Sample Name: PER_CCV_1 0.0004 ug/ml 11/07/15 Data File ID: TY17_013.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.322	292748	2.9
2)	Perchlorate_85	12.308	102159	

Date Aquired: 11/17/15 21:34 Vial Number: NA
Sample Name: PER_CCV_1 0.002 ug/ml 11/07/15 Data File ID: TY17_014.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.332	1507792	3.1
2)	Perchlorate_85	12.339	487453	

Date Aquired: 11/17/15 21:52 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 11/07/15 Data File ID: TY17_015.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.424	18685	7.8
2)	Perchlorate_85	12.084	2406	

Perchlorate LC/MS Ion Ratio Report

acceptable ratio is between 2.3 and 3.8 (DoD Perchlorate Handbook, 2006)

Data File Path : D:\masshunter\data\151121
Instrument Name : TQ (Agilent 6460 Triple Quad LC/MS)
Method File : 6460_ESI_PER_N_NEWER_K'_COLUMN.m
Operator : BA

Date Aquired: 11/21/15 13:14 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 11/07/15 Data File ID: TY21_001.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.332	2263	2.0
2)	Perchlorate_85	12.359	1147	

Date Aquired: 11/21/15 13:33 Vial Number: NA
Sample Name: PER_CCV_2 0.0004 ug/ml 11/07/15 Data File ID: TY21_002.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.943	396608	2.6
2)	Perchlorate_85	12.971	150063	

Date Aquired: 11/21/15 13:51 Vial Number: NA
Sample Name: PER_CCV_2 0.002 ug/ml 11/07/15 Data File ID: TY21_003.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.954	2300891	3.3
2)	Perchlorate_85	12.95	694682	

Date Aquired: 11/21/15 14:10 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 11/07/15 Data File ID: TY21_004.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.434	2660	1.3
2)	Perchlorate_85	12.481	2047	

Date Aquired: 11/21/15 14:30 Vial Number: NA
Sample Name: 151119SA_LCS-1 10422.1 DF 11/19/15 Data File ID: TY21_005.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.964	597869	3.0
2)	Perchlorate_85	12.96	202106	

Date Aquired: 11/21/15 14:57 Vial Number: NA
Sample Name: 151119S_ICSA 10219.7 DF 11/19/15 Data File ID: TY21_006.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.21	646156	2.3
2)	Perchlorate_85	12.206	275608	

Date Aquired: 11/21/15 15:20 Vial Number: NA
Sample Name: 151119SBLKA 9837.7 DF 11/19/15 Data File ID: TY21_007.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.515	2275	0.4
2)	Perchlorate_85	12.543	5167	

Date Aquired: 11/21/15 15:38 Vial Number: NA
Sample Name: AZ24396_S02 5185.4 DF 11/19/15 Data File ID: TY21_008.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.444	914	0.3
2)	Perchlorate_85	12.38	2669	

Date Aquired: 11/21/15 15:57 Vial Number: NA
Sample Name: AZ24397_S01 5211.0 DF 11/19/15 Data File ID: TY21_009.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.444	7117	3.8
2)	Perchlorate_85	12.563	1884	

Date Aquired: 11/21/15 16:15 Vial Number: NA
Sample Name: AZ24398_S92 4850.8 DF 11/19/15 Data File ID: TY21_010.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.251	11186	6.2
2)	Perchlorate_85	12.41	1808	

Date Aquired: 11/21/15 16:34 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 11/07/15 Data File ID: TY21_011.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.526	1552	0.6
2)	Perchlorate_85	12.431	2719	

Date Aquired: 11/21/15 16:53 Vial Number: NA
Sample Name: PER_CCV_2 0.0004 ug/ml 11/07/15 Data File ID: TY21_012.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.229	432198	2.8
2)	Perchlorate_85	13.195	152470	

Date Aquired: 11/21/15 17:11 Vial Number: NA
Sample Name: PER_CCV_2 0.002 ug/ml 11/07/15 Data File ID: TY21_013.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.29	2348590	3.2
2)	Perchlorate_85	13.276	735451	

Date Aquired: 11/21/15 17:30 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 11/07/15 Data File ID: TY21_014.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.332	3306	8.3
2)	Perchlorate_85	12.4	398	

Date Aquired: 11/21/15 17:49 Vial Number: NA
Sample Name: AZ24399_S02 4828.6 DF 11/19/15 Data File ID: TY21_015.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.301	1492	1.3
2)	Perchlorate_85	12.41	1153	

Date Aquired: 11/21/15 18:07 Vial Number: NA
Sample Name: AZ24400_S02 4498.4 DF 11/19/15 Data File ID: TY21_016.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.424	7747	3.5
2)	Perchlorate_85	12.41	2213	

Date Aquired: 11/21/15 18:26 Vial Number: NA
Sample Name: AZ24401_S03 4741.6 DF 11/19/15 Data File ID: TY21_017.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.363	6834	5.0
2)	Perchlorate_85	12.451	1372	

Date Aquired: 11/21/15 18:44 Vial Number: NA
Sample Name: AZ24401_S03_MS-1 4657.7 DF 11/19/15 Data File ID: TY21_018.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.331	560347	2.9
2)	Perchlorate_85	13.307	196197	

Date Aquired: 11/21/15 19:03 Vial Number: NA
Sample Name: AZ24401_S03_MSD-1 4576.7 DF 11/19/15 Data File ID: TY21_019.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.32	512307	3.0
2)	Perchlorate_85	13.307	169450	

Date Aquired: 11/21/15 19:22 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 11/07/15 Data File ID: TY21_020.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.281	5544	1.3
2)	Perchlorate_85	12.4	4363	

Date Aquired: 11/21/15 19:40 Vial Number: NA
Sample Name: PER_CCV_2 0.0004 ug/ml 11/07/15 Data File ID: TY21_021.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.636	437062	3.2
2)	Perchlorate_85	13.633	137251	

Date Aquired: 11/21/15 19:59 Vial Number: NA
Sample Name: PER_CCV_2 0.002 ug/ml 11/07/15 Data File ID: TY21_022.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.718	2282768	3.2
2)	Perchlorate_85	13.714	706201	

Date Aquired: 11/21/15 20:17 Vial Number: NA
Sample Name: PER_IS_50:50 0.005 ug/ml 11/07/15 Data File ID: TY21_023.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.271	2270	1.3
2)	Perchlorate_85	12.38	1712	

Date Aquired: 11/21/15 20:36 Vial Number: NA
Sample Name: 151119SA_LCS-1 10422.1 DF 11/19/15 Data File ID: TY21_024.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	13.443	603105	2.9
2)	Perchlorate_85	13.449	208280	

Date Aquired: 11/21/15 20:55 Vial Number: NA
Sample Name: 151119S_ICSA 10219.7 DF 11/19/15 Data File ID: TY21_025.d

#	NAME	Ret Time	Target Response	Ratio
1)	Perchlorate_83	12.668	636755	3.0
2)	Perchlorate_85	12.644	214189	

**EPA METHOD 6850
Perchlorate
LC/MS**

Sample Data

APPL, INC.

PERCHLORATE EPA 6850 - SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24396
QCG: #6850SM-151119A-202876

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 15.9 Percent Moisture.)								
EPA 6850	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLMFL2
Run #: TY21_008.d
Instrument: AGIL_6460
Sequence: TQ112115
Dilution Factor: 1
Initials: RP

Printed: 12/07/15 8:22:42 AM
APPL-F1-SC-MCResOnly-REG MDLs-DOD

Data File ID: TY21_008.d

Date Injected : 11/21/15

Time Injected : 15:38

Sample ID : AZ24396_S02 5185.4 DF 11/19/15

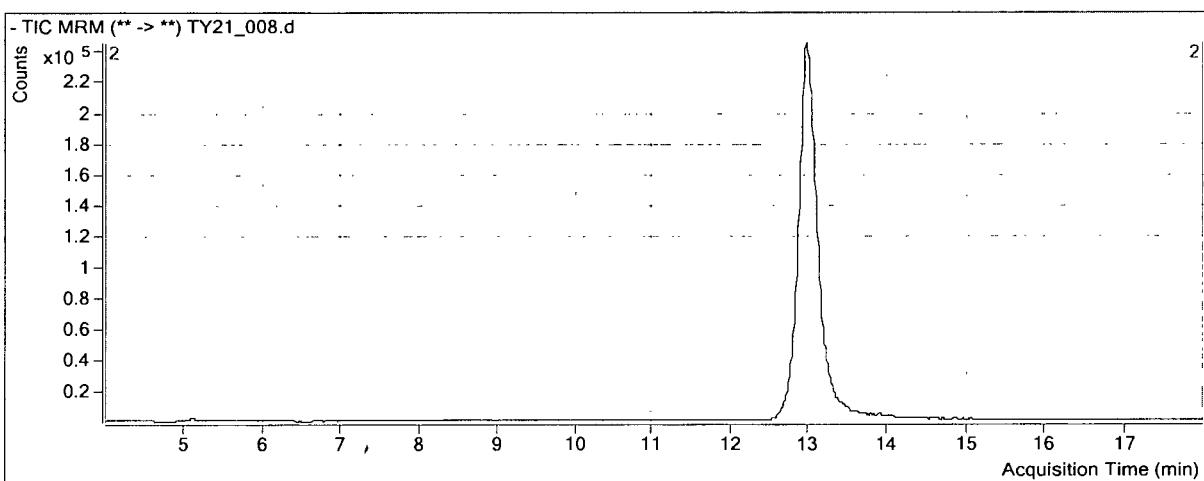
Client ID : S67-SS50-0006

Retention Time	Area Count Response	Compound ID Product Ion
12.988	4229230	PER_IS_89
12.444	914 Perchlorate_83	(914 * 0.0050) / (1.42 * 4229230.00) * 5185.40 = 0.003945 ppb
12.300	2669 Perchlorate_85	(2669 * 0.0050) / (0.46 * 4229230.00) * 5185.40 = 0.035613 ppb

Quantitative Analysis Sample Report

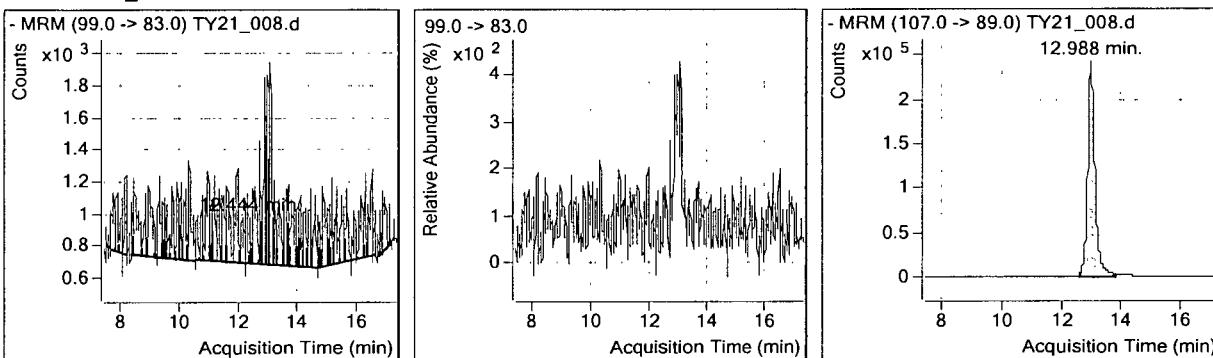
Batch Data Path D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument	LCMS QQQ	Operator	ba
Data File	TY21_008.d	Sample Name	AZ24396_S02 5185.4 DF 11/19/15
Sample Type	Sample	Acq Date	11/21/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	Acq Time	15:38
ClientID	S67-SS50-0006	Inj Vol	20

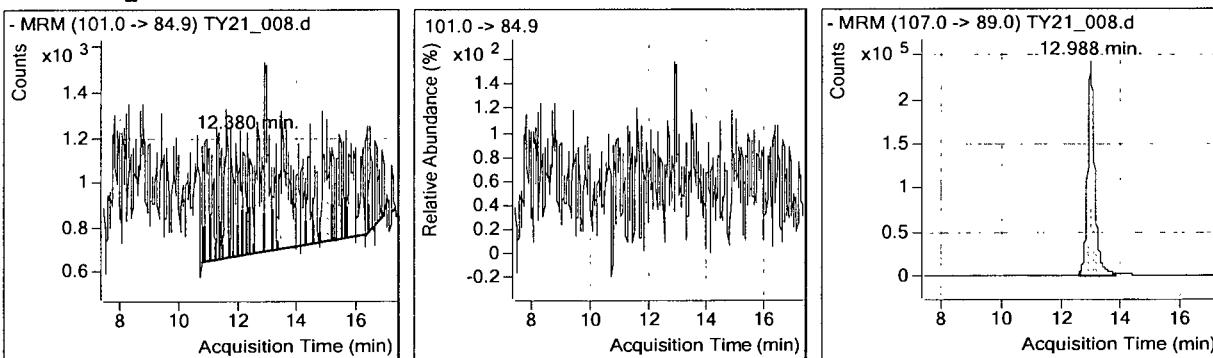


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.444	914	4229230
Perchlorate_102	PER_IS_108	12.380	2669	4229230

Perchlorate_100



Perchlorate_102



PERCHLORATE EPA 6850 - SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006P
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24397
QCG: #6850SM-151119A-202876

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 15.3 Percent Moisture.)								
EPA 6850	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLMFL2
Run #: TY21_009.d
Instrument: AGIL_6460
Sequence: TQ112115
Dilution Factor: 1
Initials: RP

Printed: 12/07/15 8:22:42 AM
APPL-F1-SC-MCResOnly-REG MDLs-DOD

Data File ID: TY21_009.d

Date Injected : 11/21/15

Time Injected : 15:57

Sample ID : AZ24397_S01 5211.0 DF 11/19/15

Client ID : S67-SS50-0006P

Retention Time	Area Count	Compound ID
	Response	Product Ion
13.038	4207513	PER_IS_89
12.444	7117 Perchlorate_83	(7117 * 0.0050) / (1.42 * 4207513.00) * 5211.00 = 0.031032 ppb
12.563	1884 Perchlorate_85	(1884 * 0.0050) / (0.46 * 4207513.00) * 5211.00 = 0.025393 ppb

Quantitative Analysis Sample Report

Batch Data Path D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument LCMS QQQ

Data File TY21_009.d

Sample Type Sample

Acq Method 6460_ESI_PER_N_NEWER_K' COLUMN.m

ClientID S67-SS50-0006P

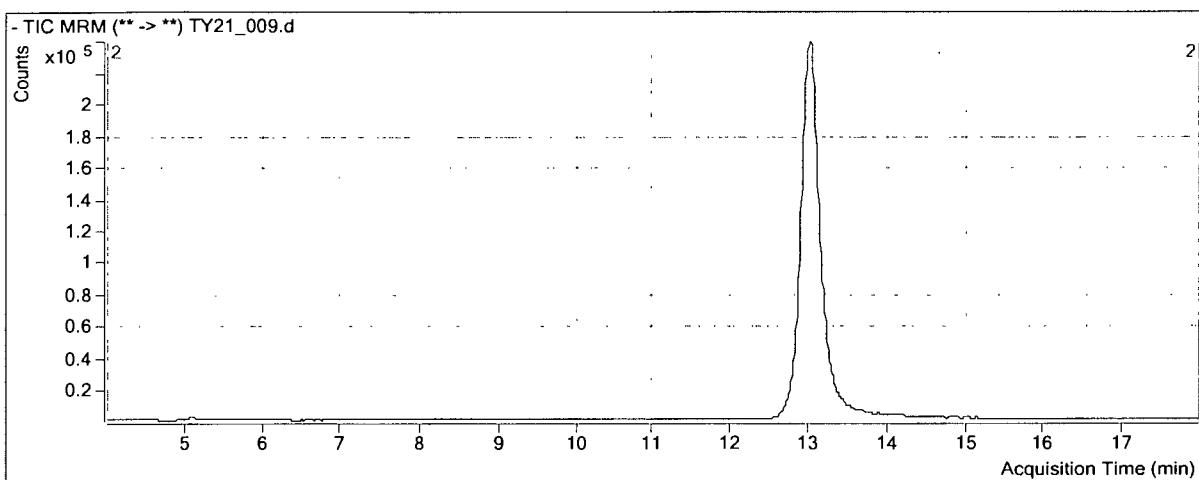
Operator ba

Sample Name AZ24397_S01 5211.0 DF 11/19/15

Acq Date 11/21/15

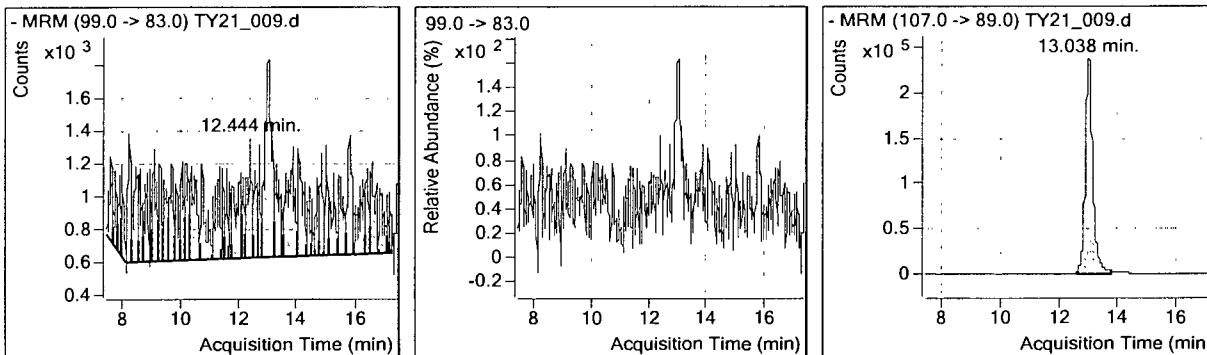
Acq Time 15:57

Inj Vol 20

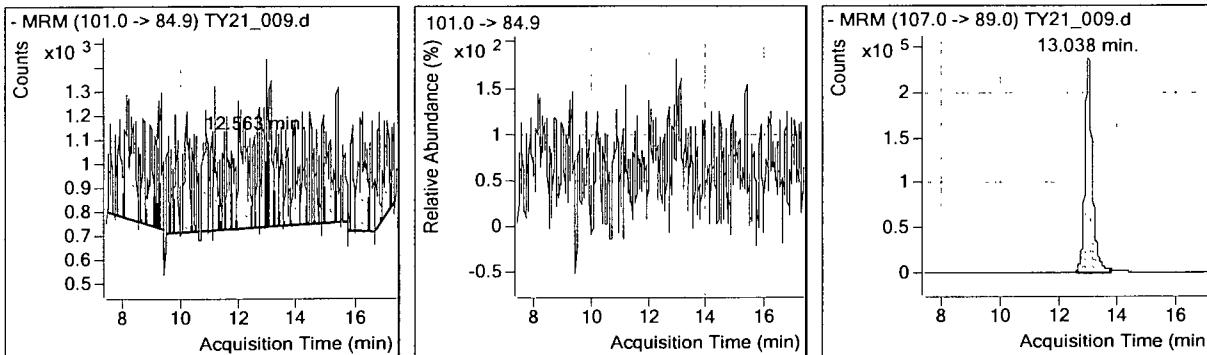


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.444	7117	4207513
Perchlorate_102	PER_IS_108	12.563	1884	4207513

Perchlorate_100



Perchlorate_102



PERCHLORATE EPA 6850 - SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SB50-1618
Sample Collection Date: 11/09/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 77838
APPL ID: AZ24398
QCG: #6850SM-151119A-202876

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 21.2 Percent Moisture.)								
EPA 6850	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLMFL2
Run #: TY21_010.d
Instrument: AGIL_6460
Sequence: TQ112115
Dilution Factor: 1
Initials: RP

Printed: 12/07/15 8:22:42 AM
APPL-F1-SC-MCResOnly-REG MDLs-DOD

Data File ID: TY21_010.d

Date Injected : 11/21/15

Time Injected : 16:15

Sample ID : AZ24398_S02 4850.8 DF 11/19/15

Client ID : S67-SB50-1618

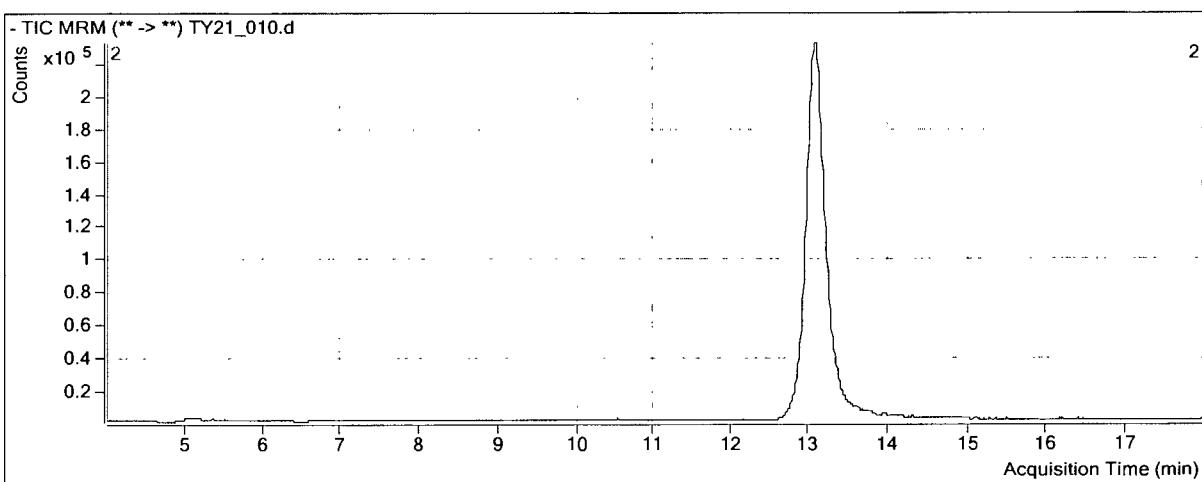
Retention Time	Area Count	Compound ID
	Response	Product Ion
13.000	4186287	PER_IS_89
12.251	11186	Perchlorate_83 $(11186 * 0.0050) / (1.42 * 4186287.00) * 4850.80 = 0.045632 \text{ ppb}$
12.400	1808	Perchlorate_85 $(1808 * 0.0050) / (0.46 * 4186287.00) * 4850.80 = 0.022799 \text{ ppb}$

Quantitative Analysis Sample Report

Batch Data Path D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

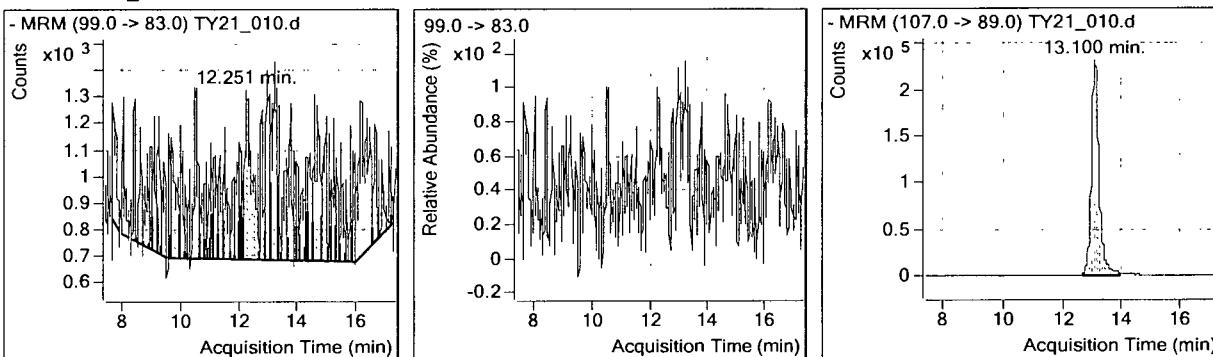
Instrument LCMS QQQ
Data File TY21_010.d
Sample Type Sample
Acq Method 6460_ESI_PER_N_NEWER_K'_COLUMN.m
ClientID S67-SB50-1618

Operator ba
Sample Name AZ24398_S02 4850.8 DF 11/19/15
Acq Date 11/21/15
Acq Time 16:15
Inj Vol 20

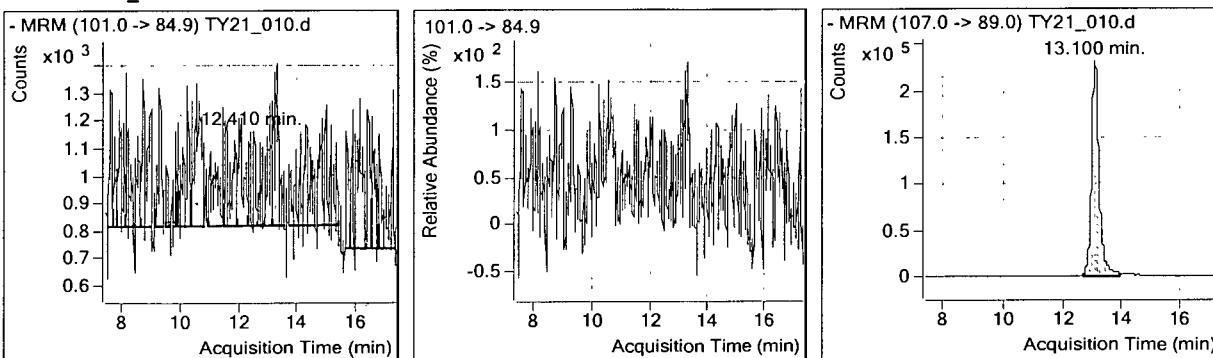


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.251	11186	4186287
Perchlorate_102	PER_IS_108	12.410	1808	4186287

Perchlorate_100



Perchlorate_102



PERCHLORATE EPA 6850 - SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS51-0006
Sample Collection Date: 11/09/15

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 77838
APPL ID: AZ24399
QCG: #6850SM-151119A-202876

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 23.6 Percent Moisture.)								
EPA 6850	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLMFL2
Run #: TY21_015.d
Instrument: AGIL_6460
Sequence: TQ112115
Dilution Factor: 1
Initials: RP

Printed: 12/07/15 8:22:42 AM
APPL-F1-SC-MCResOnly-REG MDLs-DOD

Data File ID: TY21_015.d

Date Injected : 11/21/15

Time Injected : 17:49

Sample ID : AZ24399_S02 4828.6 DF 11/19/15

Client ID : S67-SS51-0006

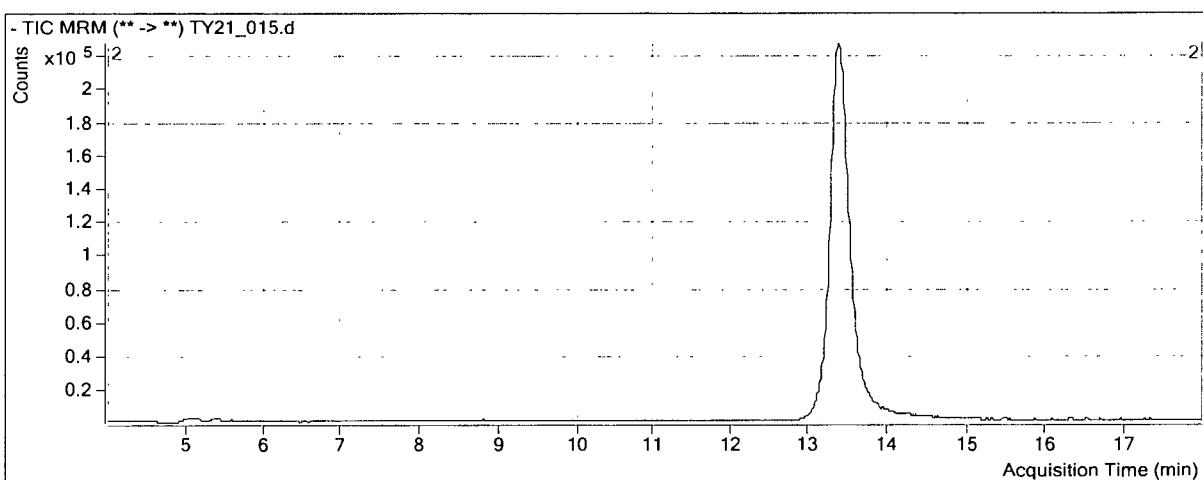
Retention Time	Area Count	Compound ID
	Response	Product Ion
13.395	4114686	PER_IS_89
12.301	*	1492 Perchlorate_83 $(1492 * 0.0050) / (1.42 * 4114686.00) * 4828.60 = 0.006164 \text{ ppb}$
12.400		1153 Perchlorate_85 $(1153 * 0.0050) / (0.46 * 4114686.00) * 4828.60 = 0.014725 \text{ ppb}$

* MANUAL INTEGRATION

Quantitative Analysis Sample Report

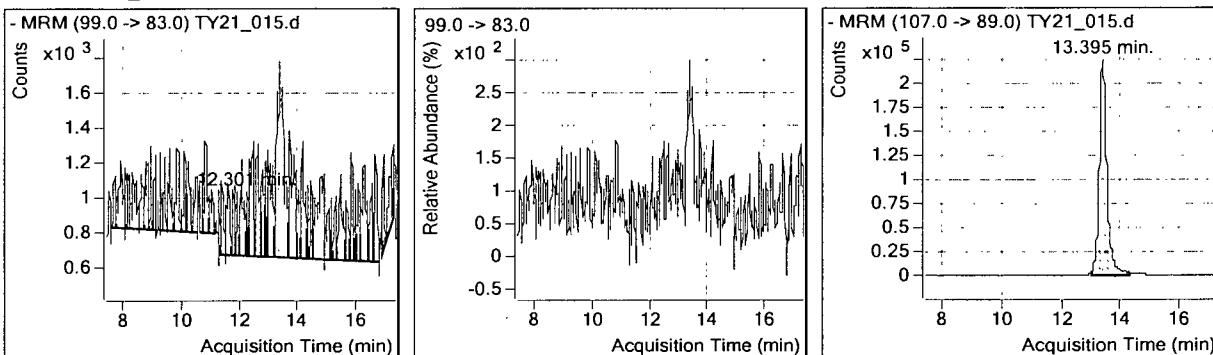
Batch Data Path D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument	LCMS QQQ	Operator	ba
Data File	TY21_015.d	Sample Name	AZ24399_S02 4828.6 DF 11/19/15
Sample Type	Sample	Acq Date	11/21/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	Acq Time	17:49
ClientID	S67-SS51-0006	Inj Vol	20

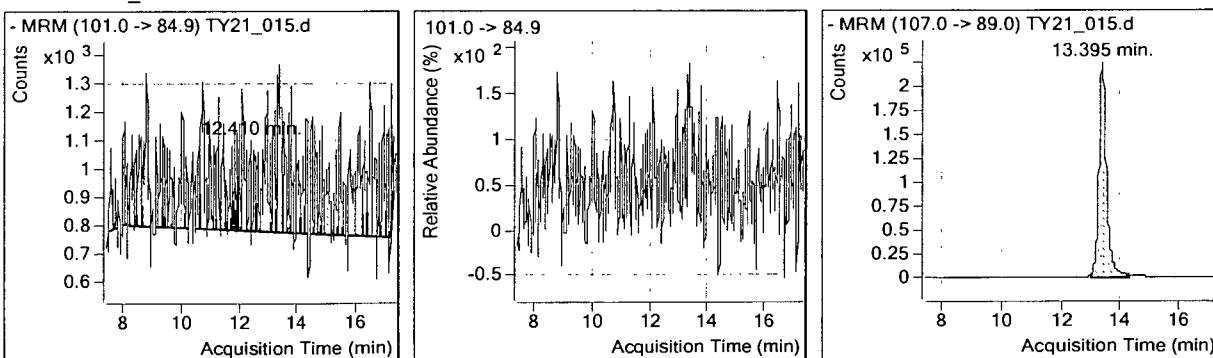


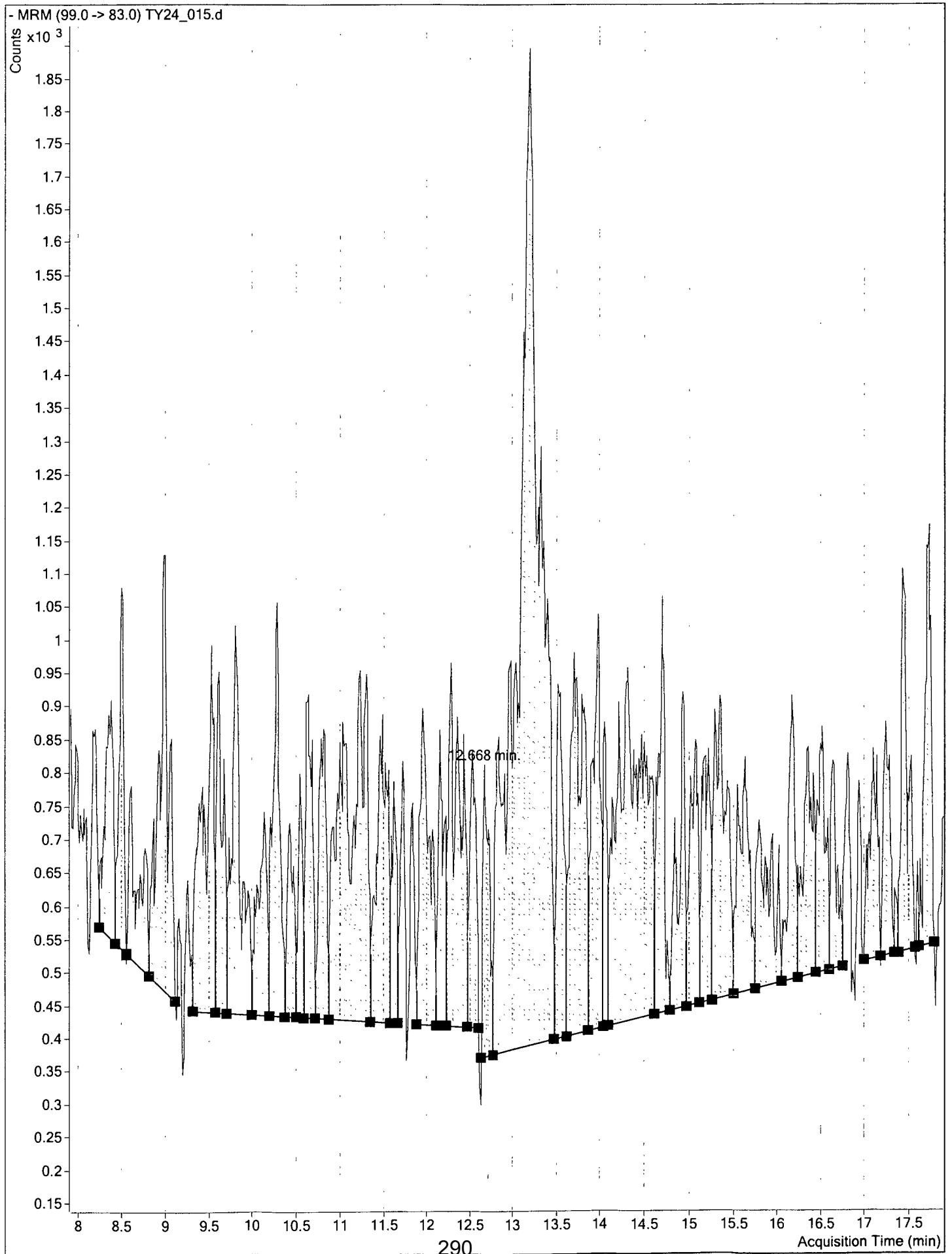
Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	*	12.301	1492
Perchlorate_102	PER_IS_108		12.410	1153

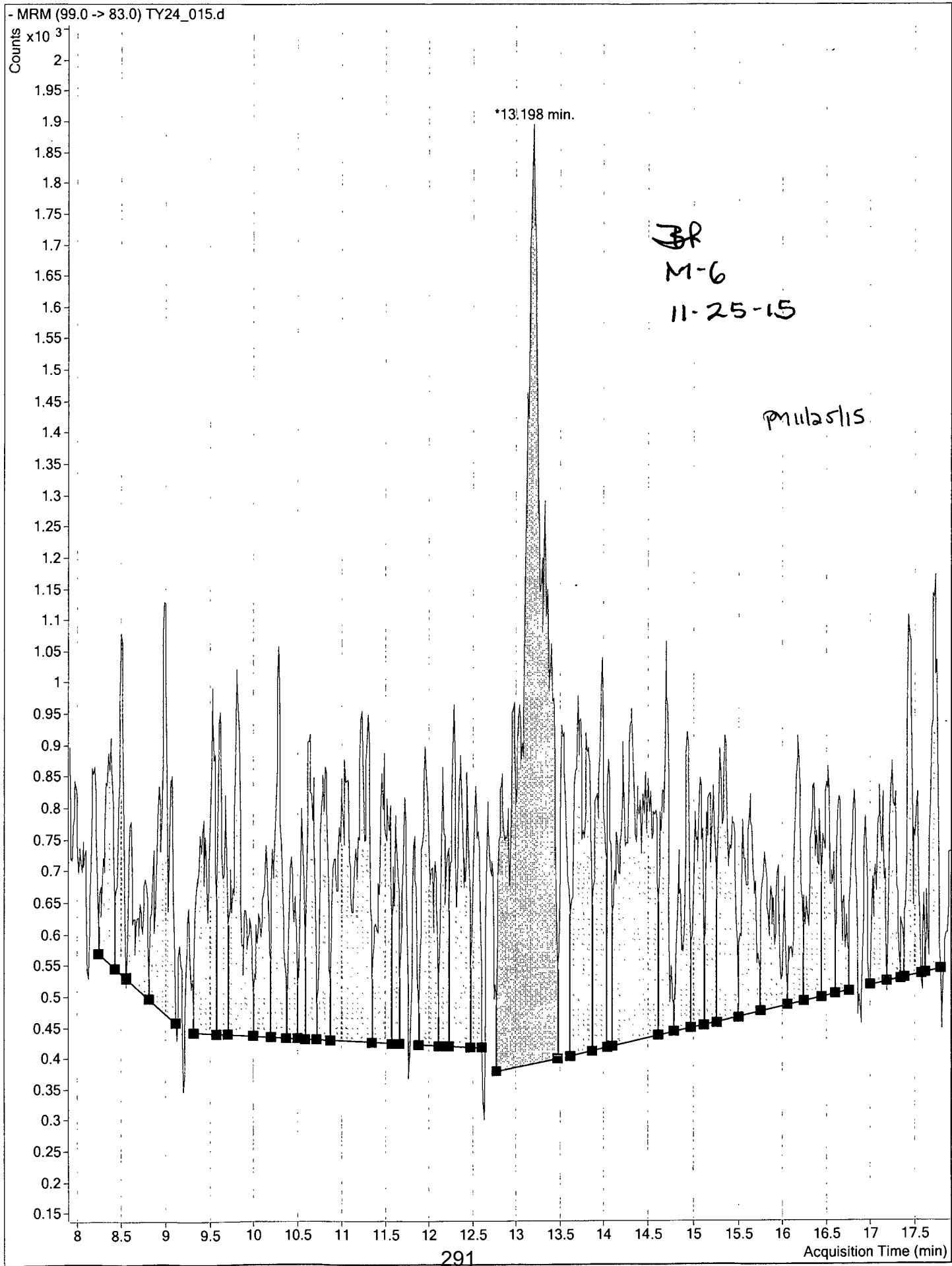
Perchlorate_100



Perchlorate_102







PERCHLORATE EPA 6850 - SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS52-0006
Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24400
QCG: #6850SM-151119A-202876

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 19.0 Percent Moisture.)								
EPA 6850	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLMFL2
Run #: TY21_016.d
Instrument: AGIL_6460
Sequence: TQ112115
Dilution Factor: 1
Initials: RP

Printed: 12/07/15 8:22:42 AM
APPL-F1-SC-MCResOnly-REG MDLs-DOD

Data File ID: TY21_016.d

Date Injected : 11/21/15

Time Injected : 18:07

Sample ID : AZ24400_S02 4498.4 DF 11/19/15

Client ID : S67-SS52-0006

Retention Time	Area Count	Compound ID
	Response	Product Ion
13.415	4254147	PER_IS_89
12.424	7747 Perchlorate_83	(7747 * 0.0050) / (1.42 * 4254147.00) * 4498.40 = 0.028840 ppb
12.400	2213 Perchlorate_85	(2213 * 0.0050) / (0.46 * 4254147.00) * 4498.40 = 0.025466 ppb

Quantitative Analysis Sample Report

Batch Data Path

D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument LCMS QQQ

Operator ba

Data File TY21_016.d

Sample Name AZ24400_S02 4498.4 DF 11/19/15

Sample Type Sample

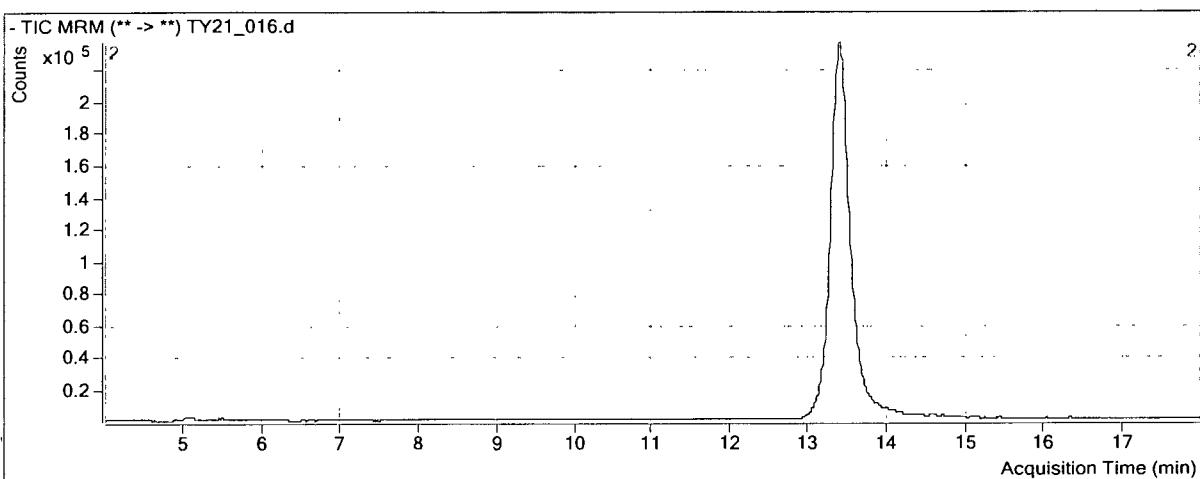
Acq Date 11/21/15

Acq Method 6460_ESI_PER_N_NEWER_K'_COLUMN.m

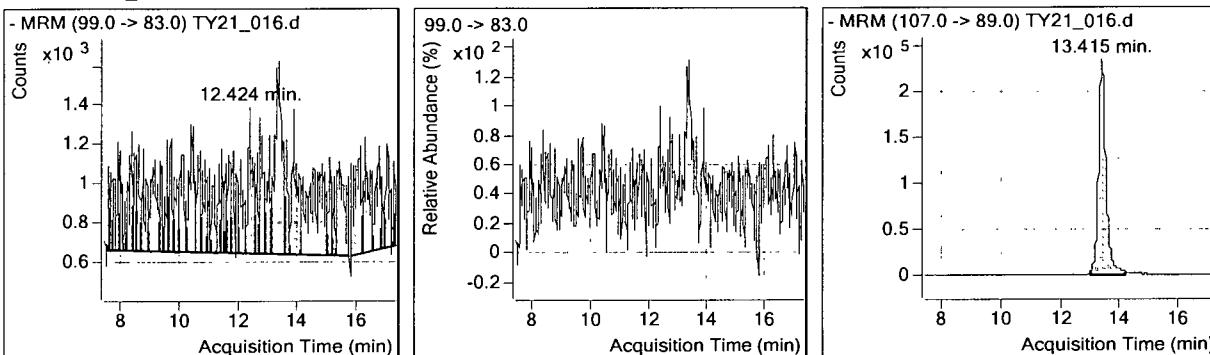
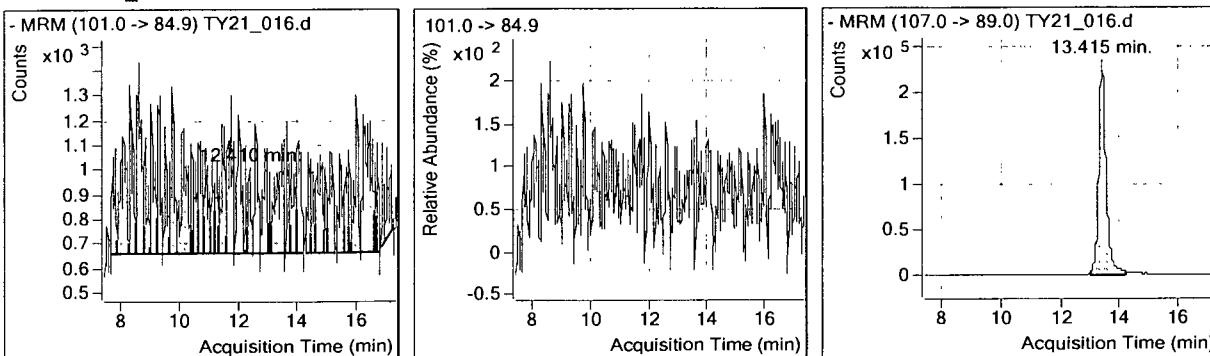
Acq Time 18:07

ClientID S67-SS52-0006

Inj Vol 20



Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.424	7747	4254147
Perchlorate_102	PER_IS_108	12.410	2213	4254147

Perchlorate_100**Perchlorate_102**

PERCHLORATE EPA 6850 - SOIL

Tetra Tech
 5700 Lake Wright Dr, Ste 309
 Norfolk, VA 23502

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Attn: Ed Corack
 Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS53-0006
 Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24401
 QCG: #6850SM-151119A-202876

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
(Solid Concentrations have been adjusted to reflect 18.6 Percent Moisture.)								
EPA 6850	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLMFL2
 Run #: TY21_017.d
 Instrument: AGIL_6460
 Sequence: TQ112115
 Dilution Factor: 1
 Initials: RP

Printed: 12/07/15 8:22:42 AM
 APPL-F1-SC-MCResOnly-REG MDLs-DOD

Data File ID: TY21_017.d

Date Injected : 11/21/15

Time Injected : 18:26

Sample ID : AZ24401_S03 4741.6 DF 11/19/15

Client ID : S67-SS53-0006

Retention Time	Area Count	Compound ID
	Response	Product Ion
13.314	4141136	PER_IS_89
12.363	6834 Perchlorate_83	(6834 * 0.0050) / (1.42 * 4141136.00) * 4741.60 = 0.027548 ppb
12.451	*	1372 Perchlorate_85 (1372 * 0.0050) / (0.46 * 4141136.00) * 4741.60 = 0.017096 ppb

* MANUAL INTEGRATION

Quantitative Analysis Sample Report

Batch Data Path D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument LCMS QQQ

Data File TY21_017.d

Sample Type Sample

Acq Method 6460_ESI_PER_N_NEWER_K' COLUMN.m

ClientID S67-SS53-0006

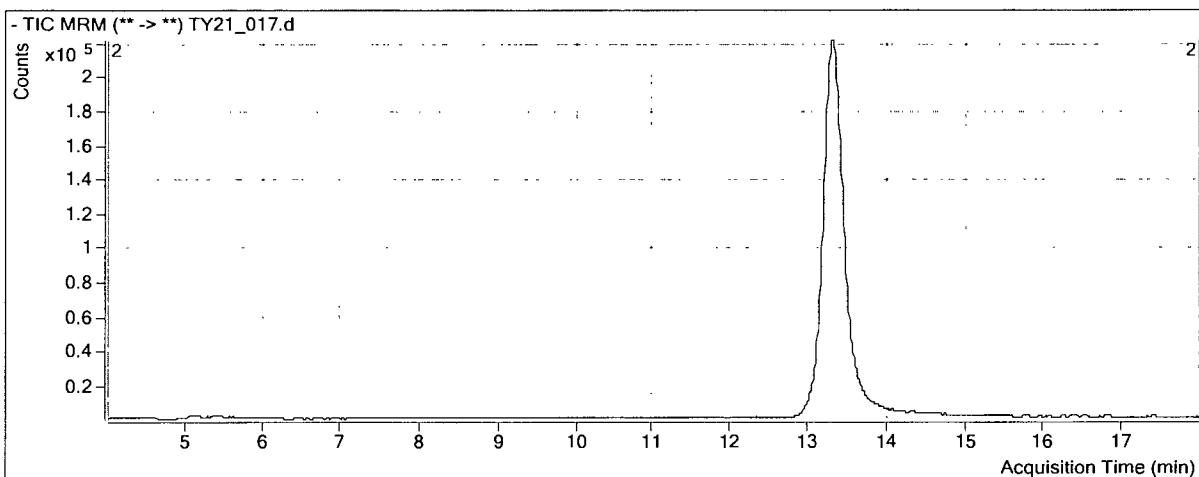
Operator ba

Sample Name AZ24401_S03 4741.6 DF 11/19/15

Acq Date 11/21/15

Acq Time 18:26

Inj Vol 20

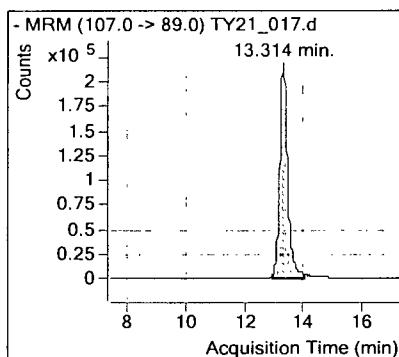
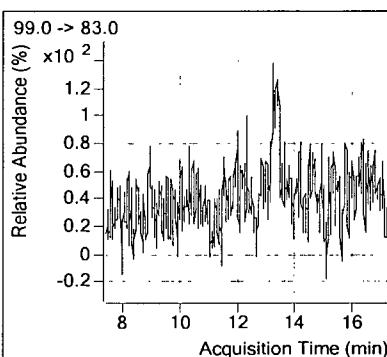
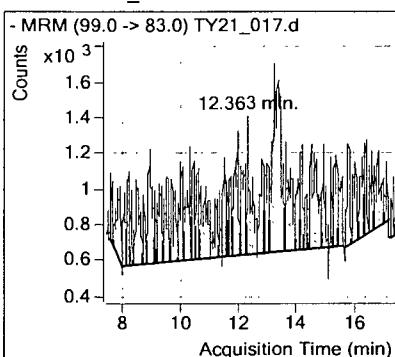


Compound	ISTD	RT	Resp	ISTD Resp
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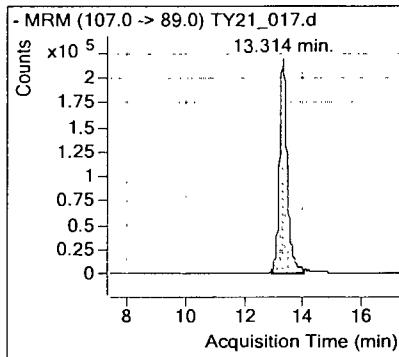
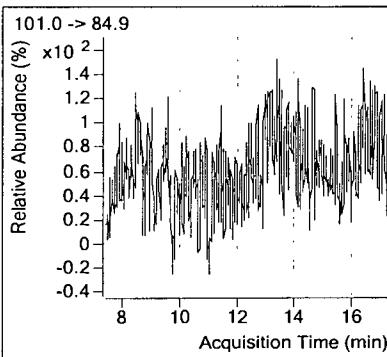
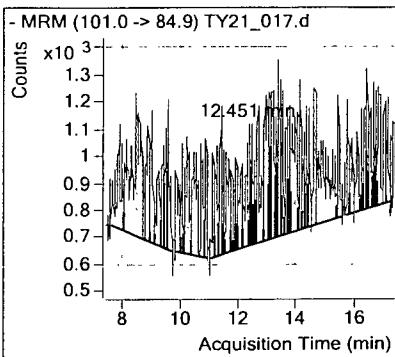
Perchlorate_100	PER_IS_108	12.363	6834	4141136
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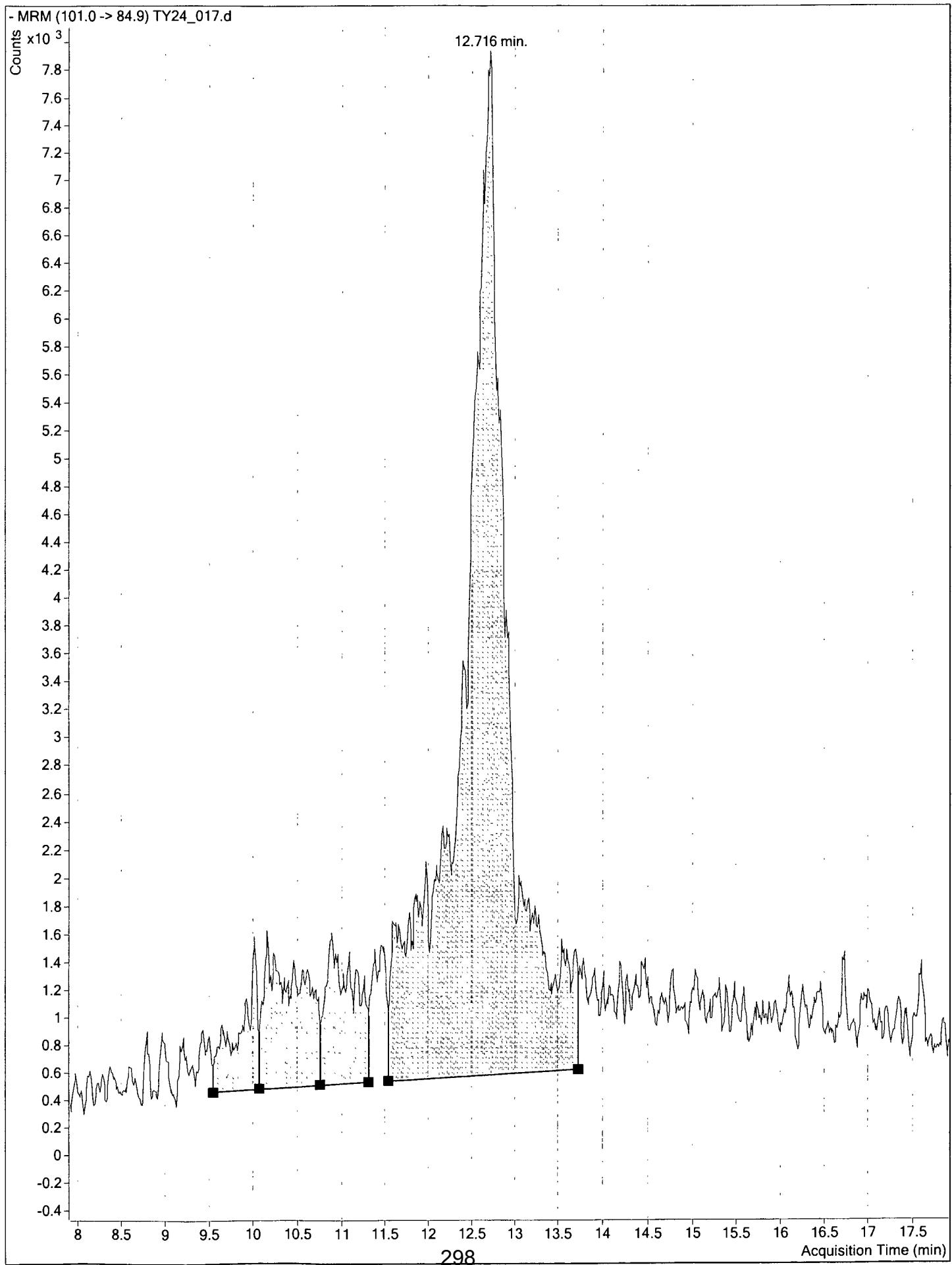
Perchlorate_102	PER_IS_108	*	12.451	1372	4141136 * MANUAL INT
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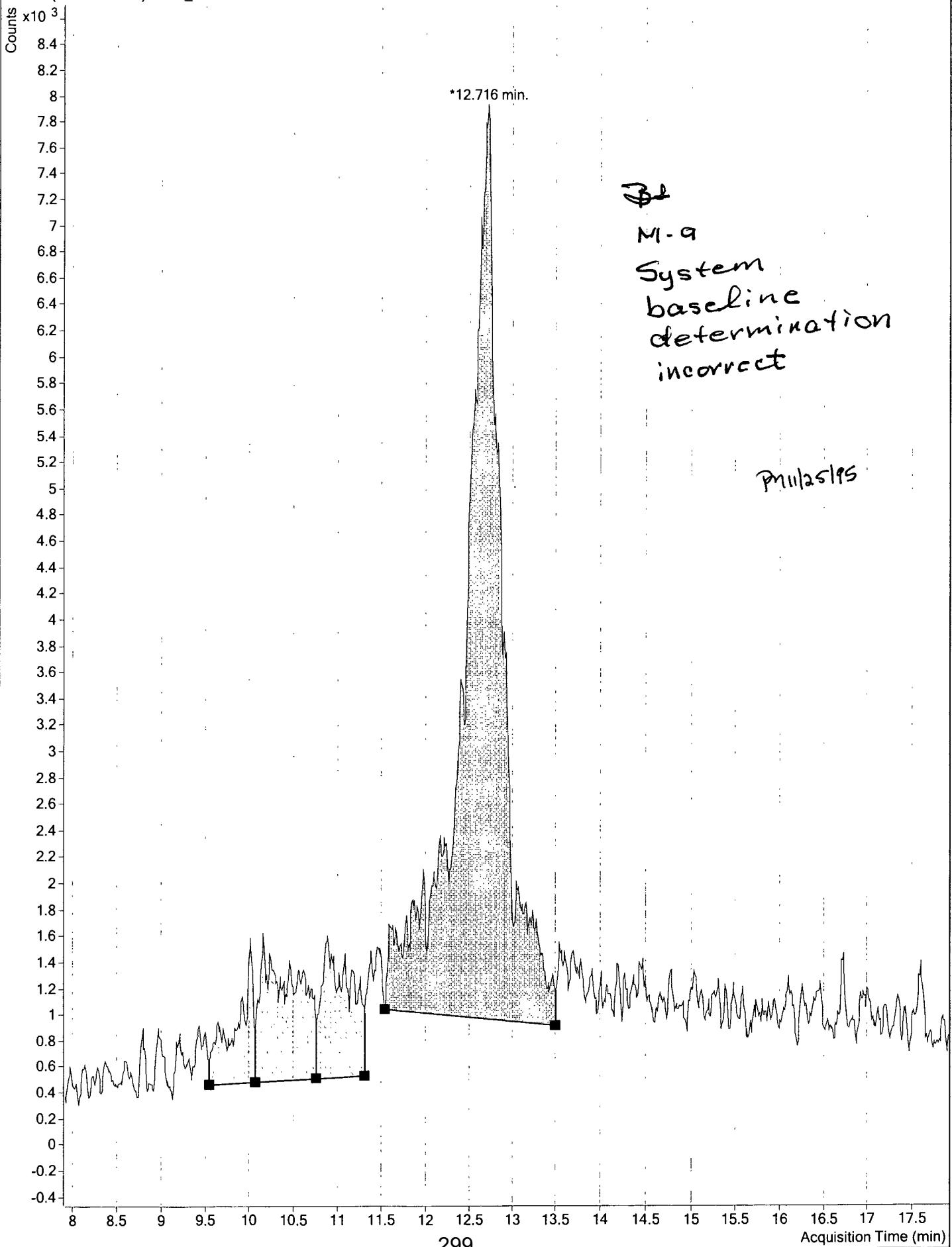
Perchlorate_100



Perchlorate_102







**EPA METHOD 6850
Perchlorate
LC/MS**

Calibration Data

APPL, INC.

METHOD 6850 CALIBRATION SUMMARY

Lab Name: APPL Inc.

DETECTOR ID : Agilent 6460 Triple Quad LC/MS

Average Relative Response Factor Summary

Analyte Id:	R.R.F.#1 PERCHLORATE 0.0002 PPM	R.R.F.#2 PERCHLORATE 0.0004 PPM	R.R.F.#3 PERCHLORATE 0.001 PPM	R.R.F.#4 PERCHLORATE 0.002 PPM	R.R.F.#5 PERCHLORATE 0.005 PPM	R.R.F.#6 PERCHLORATE 0.010 PPM	AVERAGE REL. RESP. FACTOR	%RSD RRF
Perchlorate_83	1.235660	1.781898	1.437767	1.225542	1.303127	1.537404	1.420233	15.12
Perchlorate_85	0.469928	0.609394	0.470953	0.370488	0.383191	0.452678	0.459439	18.60

FILE ID : TQ1117A.FR8

Perchlorate_83

RESPONSE FACTOR CALCULATIONS - AREA COUNTS

DATA FILES : TY17_003.d - TY17_008.d

The Data points that were Read Were

Standard Response	Standard Concentration µg/ml	Internal Standard Response	Internal Standard Concentration µg/ml	Response Factor	RPD	%RSD
121718.00	0.0002	2462611.00	0.0050	1.235660	13.00	15.12
261401.00	0.0004	1833726.00	0.0050	1.781898	25.47	
692408.00	0.0010	2407928.00	0.0050	1.437767	1.23	
1411824.00	0.0020	2879999.00	0.0050	1.225542	13.71	
3772406.00	0.0050	2894887.00	0.0050	1.303127	8.25	
8100882.00	0.0100	2634597.00	0.0050	1.537404	8.25	

The Average Response Factor = 1.420233

RESPONSE FACTOR CALCULATIONS - AREA COUNTS

DATA FILES : TY17_003.d - TY17_008.d

The Data points that were Read Were

Standard Response	Standard Concentration μg/ml	Internal Standard Response	Internal Standard Concentration μg/ml	Response Factor	RPD	%RSD
46290.00	0.0002	2462611.00	0.0050	0.469928	2.28	18.60
89397.00	0.0004	1833726.00	0.0050	0.609394	32.64	
226804.00	0.0010	2407928.00	0.0050	0.470953	2.51	
426802.00	0.0020	2879999.00	0.0050	0.370488	19.36	
1109296.00	0.0050	2894887.00	0.0050	0.383191	16.60	
2385247.00	0.0100	2634597.00	0.0050	0.452678	1.47	

The Average Response Factor = 0.459439

Data File ID: TY17_003.d

Date Injected : 11/17/15

Time Injected : 18:09

Sample ID : PERCHLORATE 0.0002 ug/ml 11/07/15

Client ID : NA

Retention Time	Area Count Response	Compound ID Product Ion
11.918	2462611	PER_IS_89
11.924	121718	Perchlorate_83
11.911	46290	Perchlorate_85

Quantitative Analysis Sample Report

Batch Data Path

D:\MassHunter\Data\151117\QuantResults\151117_A_MI.batch.bin

Instrument LCMS QQQ

Operator ba

Data File TY17_003.d

Sample Name PERCHLORATE 0.0002 ug/ml 11/07/15

Sample Type Sample

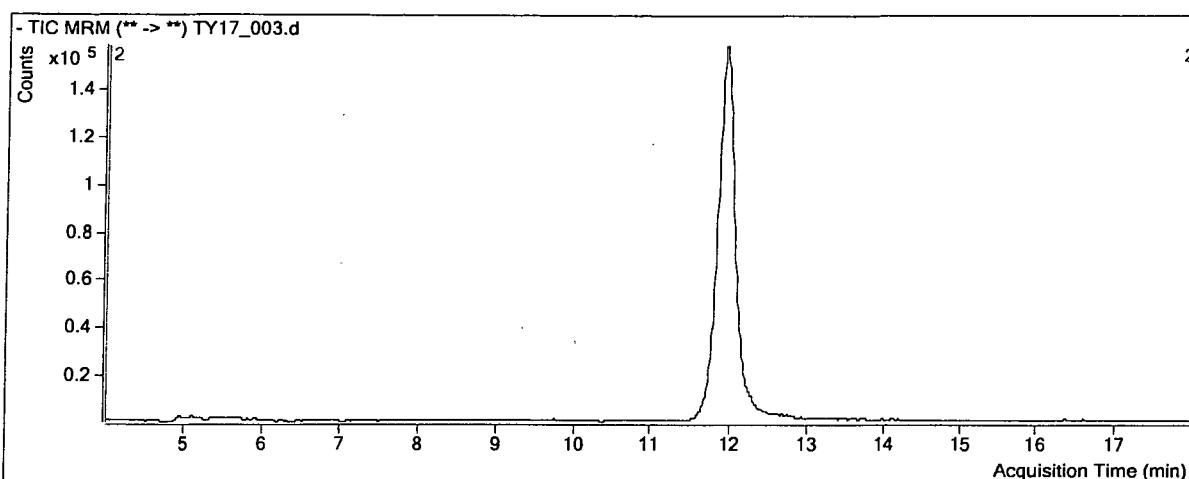
Acq Date 11/17/15

Acq Method 6460_ESI_PER_N_NEWER_K'.COLUMN.m

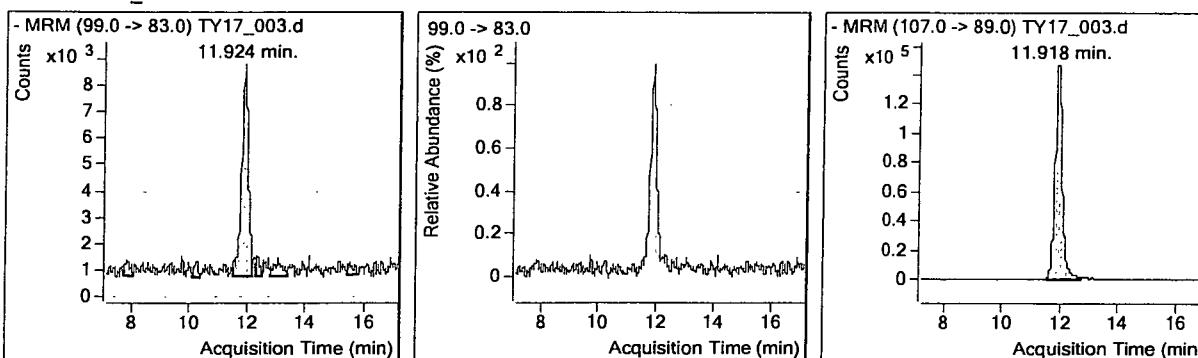
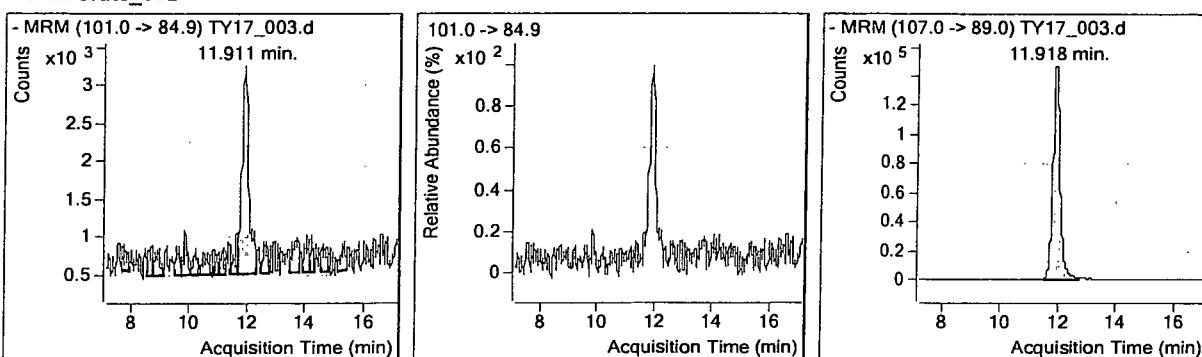
Acq Time 18:09

ClientID NA

Inj Vol 20



Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	11.924	121718	2462611
Perchlorate_102	PER_IS_108	11.911	46290	2462611

Perchlorate_100**Perchlorate_102**

Data File ID: TY17_004.d

Date Injected : 11/17/15

Time Injected : 18:27

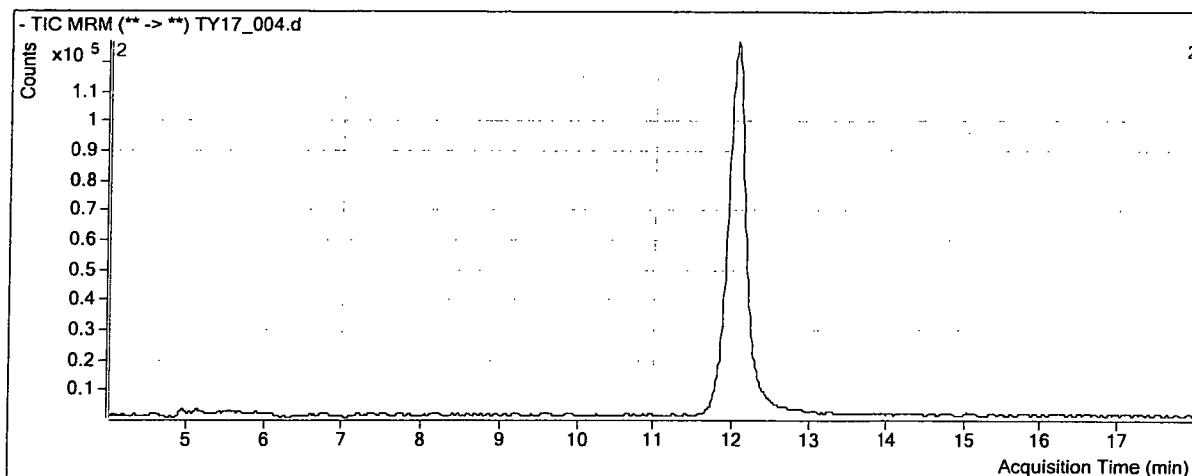
Sample ID : PERCHLORATE 0.0004 ug/ml 11/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
12.000	1833726	PER_IS_89
12.016	261401	Perchlorate_83
12.023	89397	Perchlorate_85

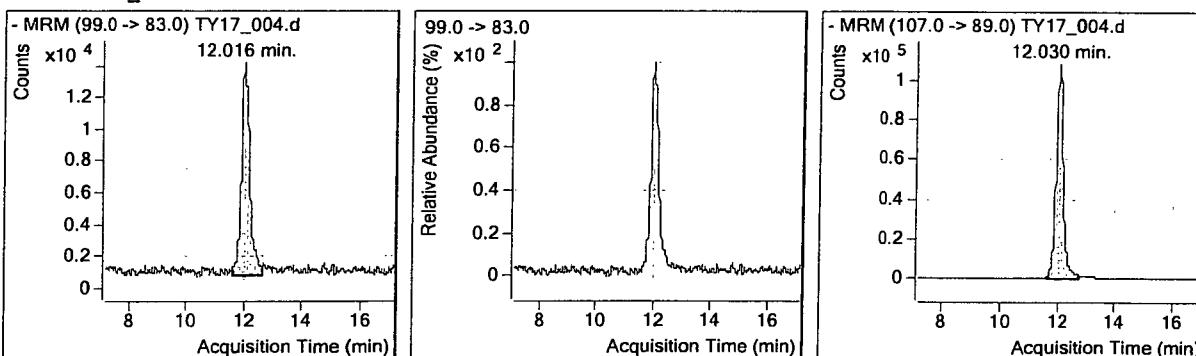
Quantitative Analysis Sample Report

Batch Data Path D:\MassHunter\Data\151117\QuantResults\151117_A_MI.batch.bin
Instrument LCMS QQQ **Operator** ba
Data File TY17_004.d **Sample Name** PERCHLORATE 0.0004 ug/ml 11/07/15
Sample Type Sample **Acq Date** 11/17/15
Acq Method 6460_ESI_PER_N_NEWER_K'_COLUMN.m **Acq Time** 18:27
ClientID NA **Inj Vol** 20

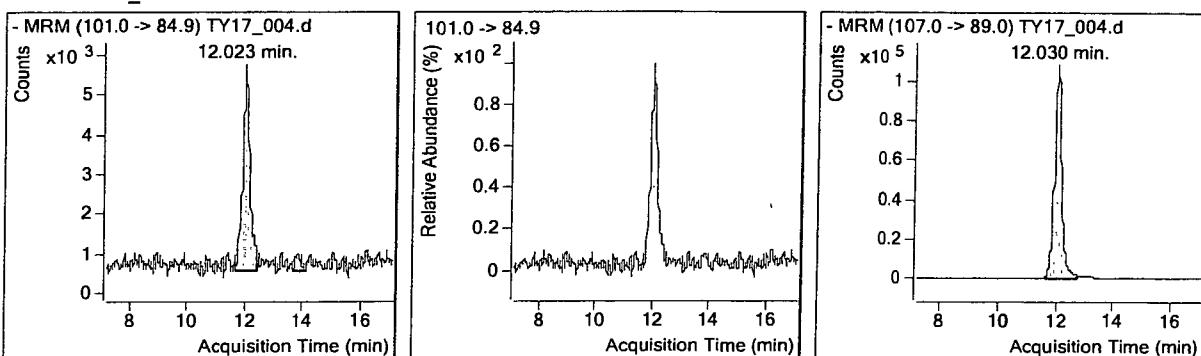


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.016	261401	1833726
Perchlorate_102	PER_IS_108	12.023	89397	1833726

Perchlorate_100



Perchlorate_102



Data File ID: TY17_005.d

Date Injected : 11/17/15

Time Injected : 18:46

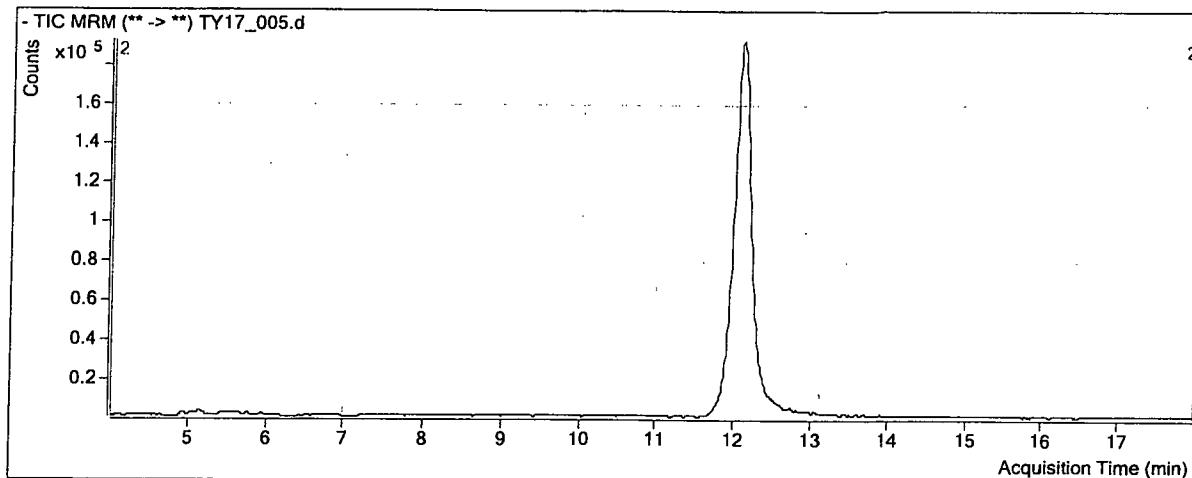
Sample ID : PERCHLORATE 0.001 ug/ml 11/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
12.071	2407928	PER_IS_89
12.098	692408	Perchlorate_83
12.064	226804	Perchlorate_85

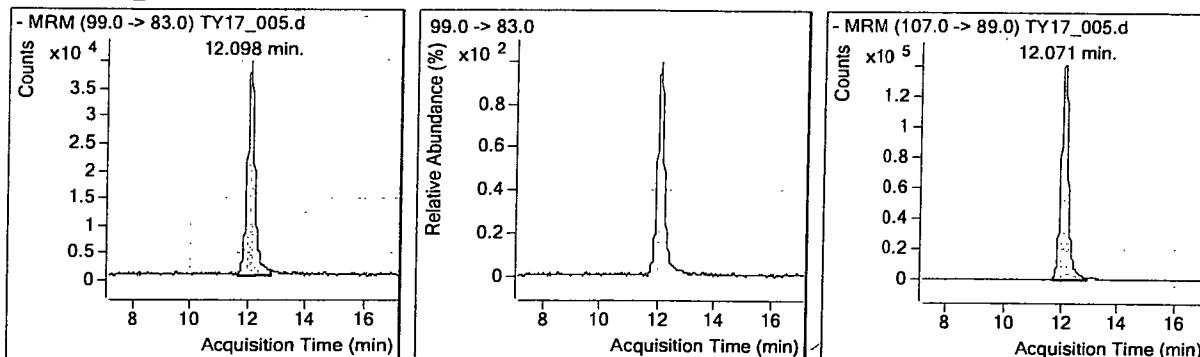
Quantitative Analysis Sample Report

Batch Data Path D:\MassHunter\Data\151117\QuantResults\151117_A_MI.batch.bin
Instrument LCMS QQQ **Operator** ba
Data File TY17_005.d **Sample Name** PERCHLORATE 0.001 ug/ml 11/07/15
Sample Type Sample **Acq Date** 11/17/15
Acq Method 6460_ESI_PER_N_NEWER_K'_COLUMN.m **Acq Time** 18:46
ClientID NA **Inj Vol** 20

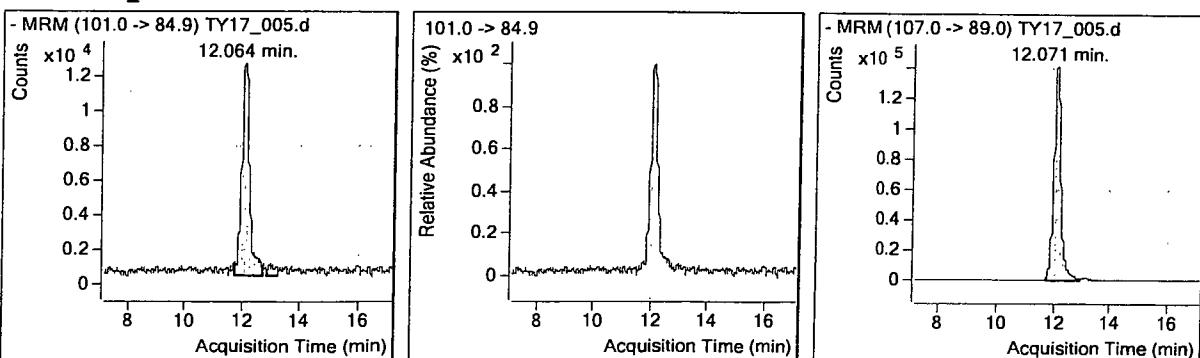


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.098	692408	2407928
Perchlorate_102	PER_IS_108	12.064	226804	2407928

Perchlorate_100



Perchlorate_102



Data File ID: TY17_006.d

Date Injected : 11/17/15

Time Injected : 19:05

Sample ID : PERCHLORATE 0.002 ug/ml 11/07/15

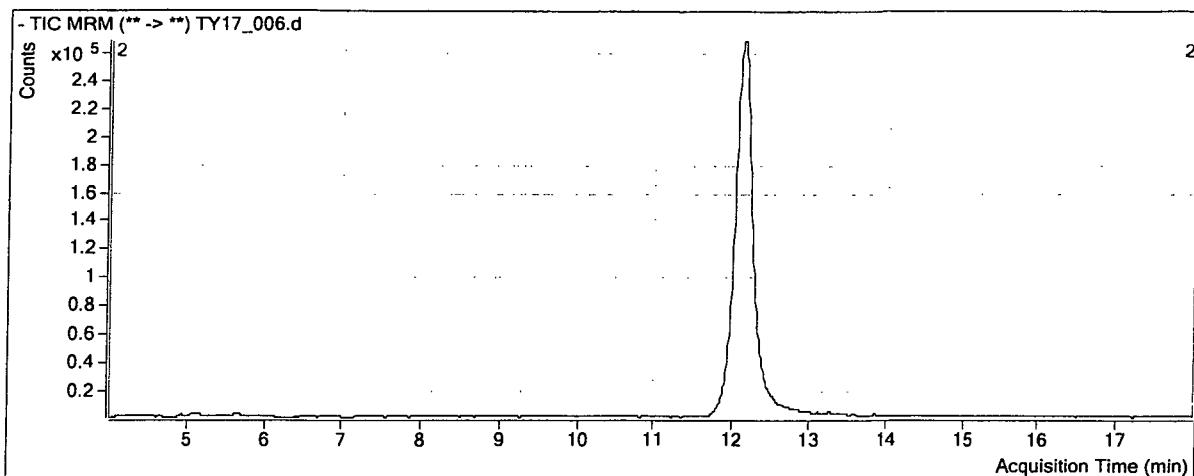
Client ID : NA

Retention Time	Area Count Response	Compound ID Product Ion
12.121	2879999	PER_IS_89
12.138	1411824	Perchlorate_83
12.125	426802	Perchlorate_85

Quantitative Analysis Sample Report

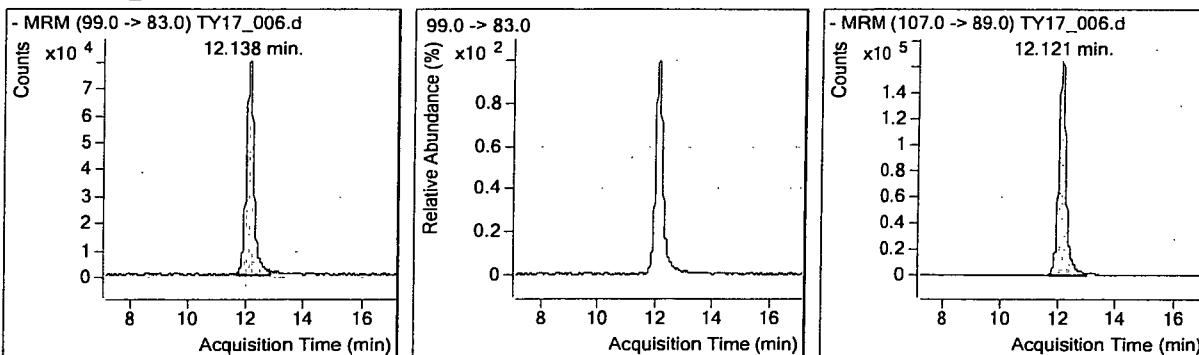
Batch Data Path D:\MassHunter\Data\151117\QuantResults\151117_A_MI.batch.bin

Instrument	LCMS QQQ	Operator	ba
Data File	TY17_006.d	Sample Name	PERCHLORATE 0.002 ug/ml 11/07/15
Sample Type	Sample	Acq Date	11/17/15
Acq Method	6460_ESI_PER_N_NEWER_K_COLUMN.m	Acq Time	19:05
ClientID	NA	Inj Vol	20

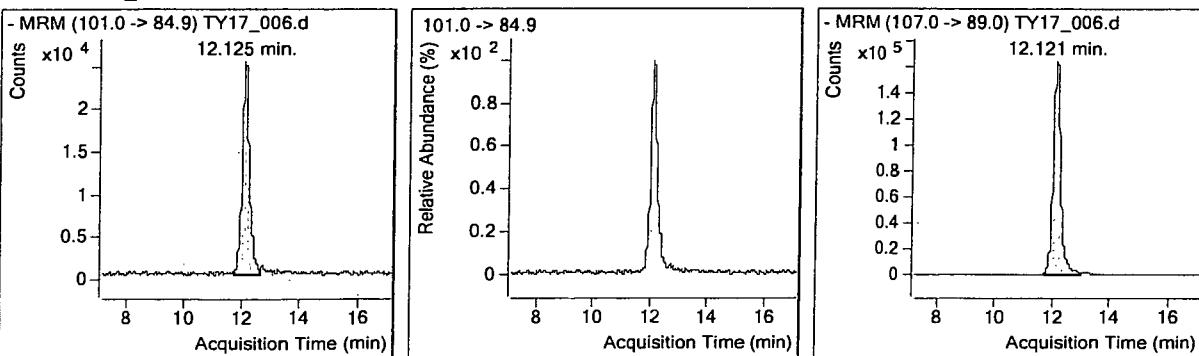


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.138	14111824	2879999
Perchlorate_102	PER_IS_108	12.125	426802	2879999

Perchlorate_100



Perchlorate_102



Data File ID: TY17_007.d

Date Injected : 11/17/15

Time Injected : 19:23

Sample ID : PERCHLORATE 0.005 ug/ml 11/07/15

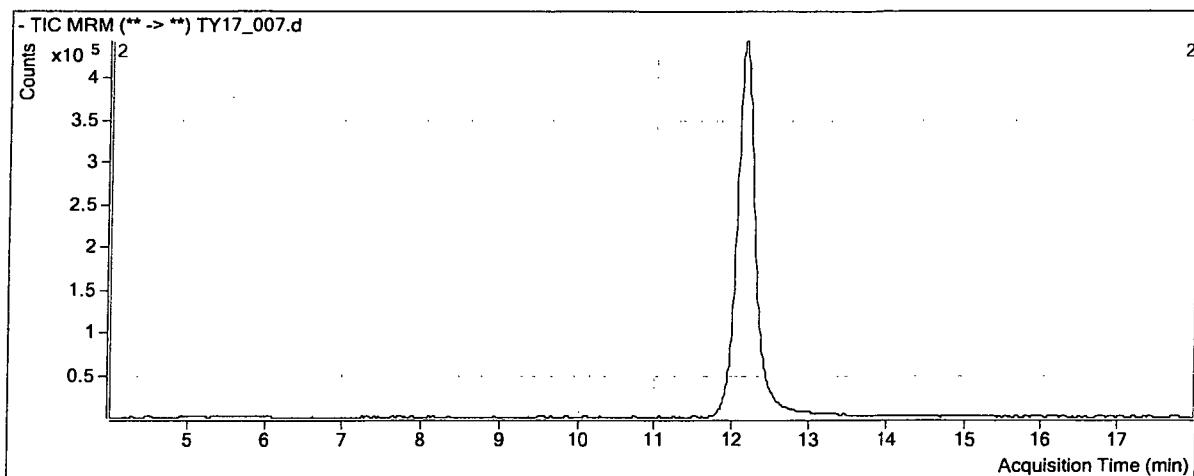
Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
12.162	2894887	PER_IS_89
12.159	3772406	Perchlorate_83
12.166	1109296	Perchlorate_85

Quantitative Analysis Sample Report

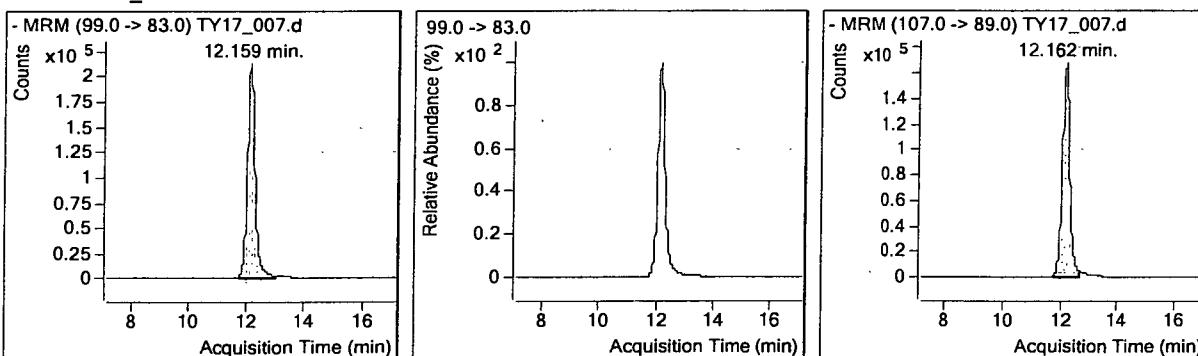
Batch Data Path D:\MassHunter\Data\151117\QuantResults\151117_A_MI.batch.bin

Instrument	LCMS QQQ	Operator	ba
Data File	TY17_007.d	Sample Name	PERCHLORATE 0.005 ug/ml 11/07/15
Sample Type	Sample	Acq Date	11/17/15
Acq Method	6460_ESI_PER_N_NEWER_K' COLUMN.m	Acq Time	19:23
ClientID	NA	Inj Vol	20

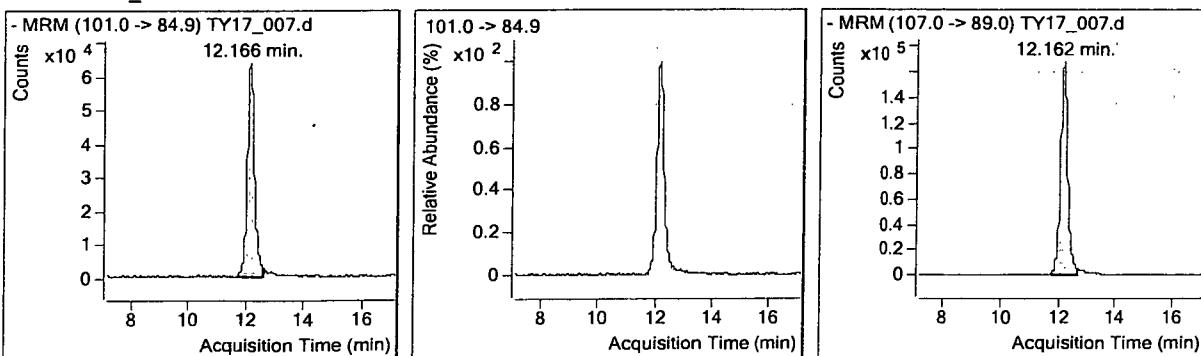


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.159	3772406	2894887
Perchlorate_102	PER_IS_108	12.166	1109296	2894887

Perchlorate_100



Perchlorate_102



Data File ID: TY17_008.d

Date Injected : 11/17/15

Time Injected : 19:42

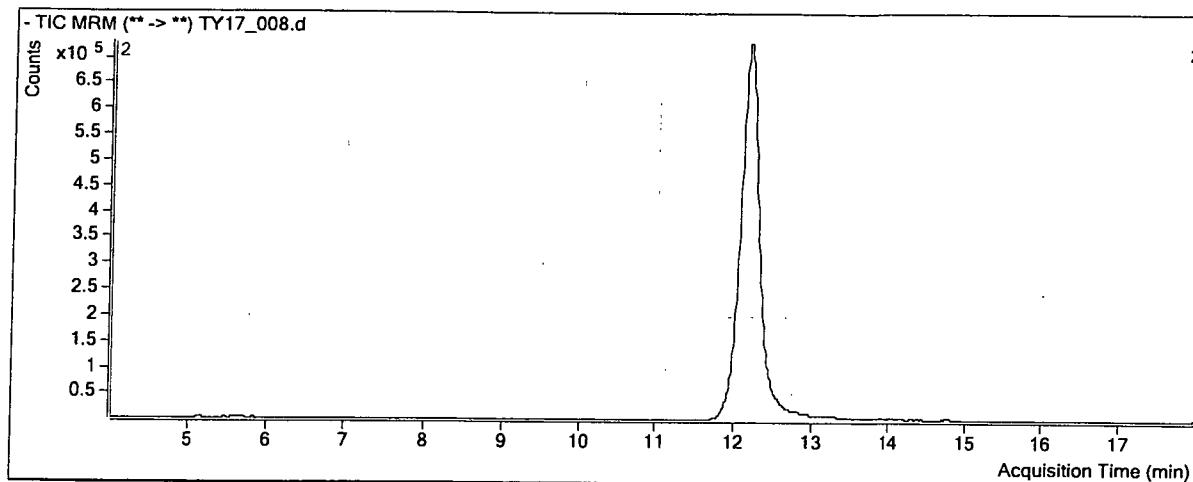
Sample ID : PERCHLORATE 0.010 ug/ml 08/01/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
12.152	2634597	PER_IS_89
12.169	8100882	Perchlorate_83
12.166	2385247	Perchlorate_85

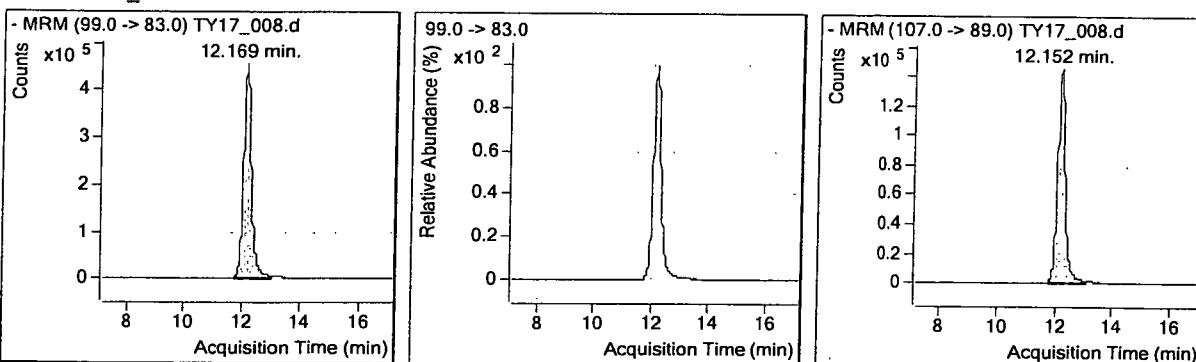
Quantitative Analysis Sample Report

Batch Data Path D:\MassHunter\Data\151117\QuantResults\151117_A_MI.batch.bin
Instrument LCMS QQQ **Operator** ba
Data File TY17_008.d **Sample Name** PERCHLORATE 0.010 ug/ml 08/01/15
Sample Type Sample **Acq Date** 11/17/15
Acq Method 6460_ESI_PER_N_NEWER_K'_COLUMN.m **Acq Time** 19:42
ClientID NA **Inj Vol** 20

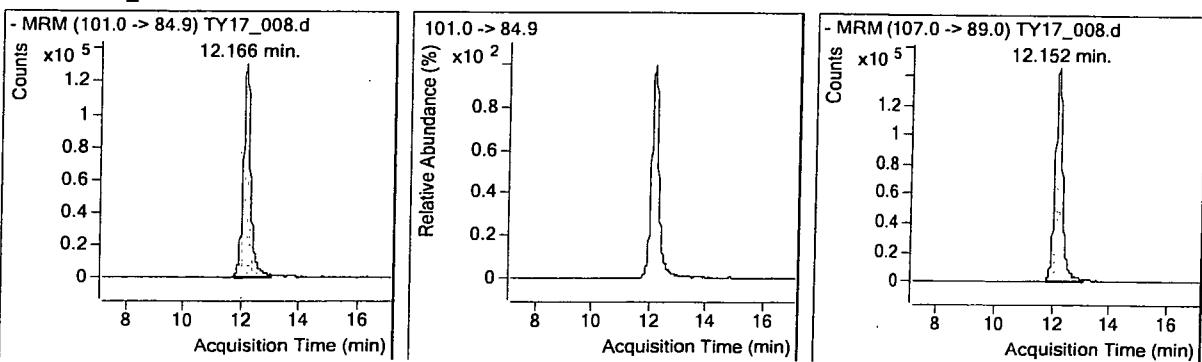


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.169	8100882	2634597
Perchlorate_102	PER_IS_108	12.166	2385247	2634597

Perchlorate_100



Perchlorate_102



SECOND SOURCE CALIBRATION VERIFICATION SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: TY17_010.d

Date (s) of Analysis From:11/17/15 To:11/17/15 Time (s) of Analysis From:18:09 To:20:00				Date of Analysis: 11/17/15 Time of Analysis: 20:19 Standard Id: PER SS (Standard) 0.0004ug/ml			
COMPOUND	RT	RT WINDOW FROM TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	11.92	11.82	12.02	12.28	1.420233	N	3.5
Perchlorate_85	11.91	11.81	12.01	12.32	0.459439	N	1.2

FILE ID : TQCK1710.RFB

Data File ID: TY17_010.d

Date Injected : 11/17/15

Time Injected : 20:19

Sample ID : PER_SS 0.0004 ug/ml 11/06/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
12.295	2750559	PER_IS_89
12.281	301652	Perchlorate_83
12.318	99865	Perchlorate_85

Quantitative Analysis Sample Report

Batch Data Path D:\MassHunter\Data\151117\QuantResults\151117_A_MI.batch.bin

Instrument LCMS QQQ

Data File TY17_010.d

Sample Type Sample

Acq Method 6460_ESI_PER_N_NEWER_K'.COLUMN.m

ClientID NA

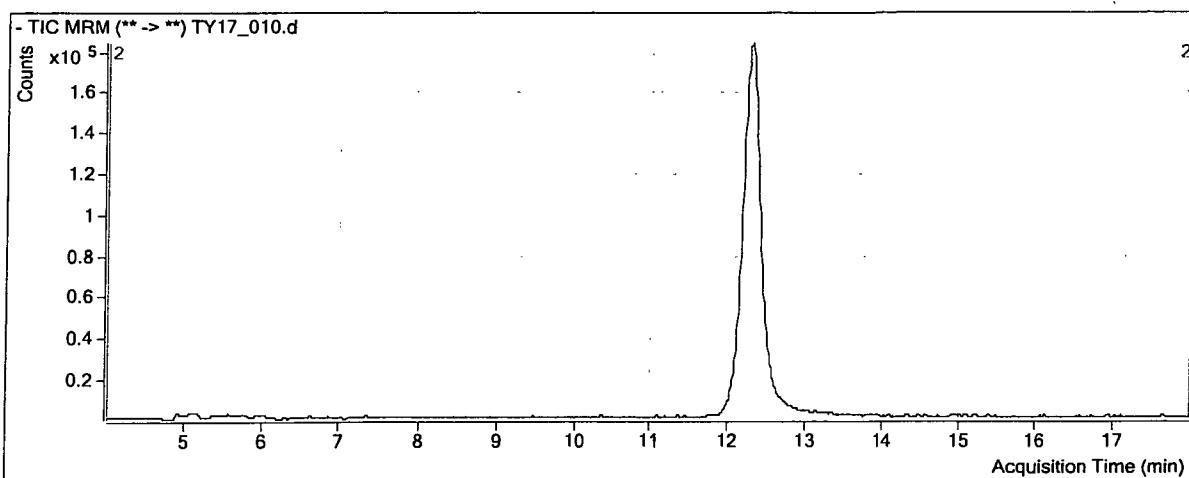
Operator ba

Sample Name PER_SS 0.0004 ug/ml 11/06/15

Acq Date 11/17/15

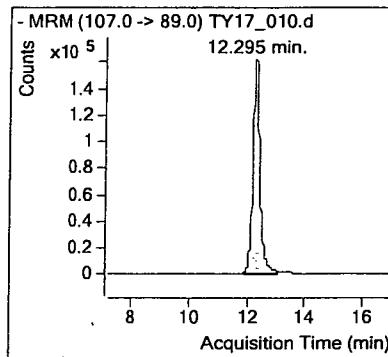
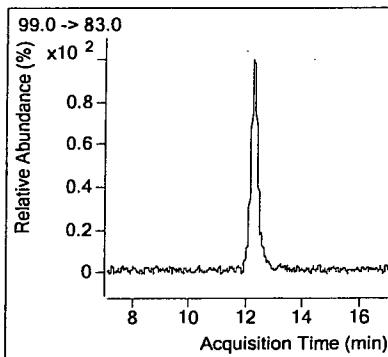
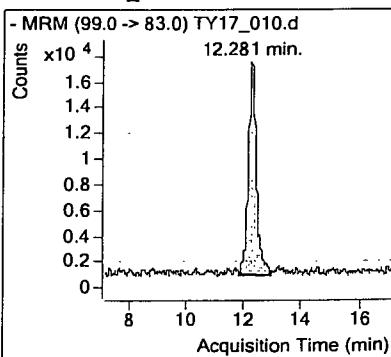
Acq Time 20:19

Inj Vol 20

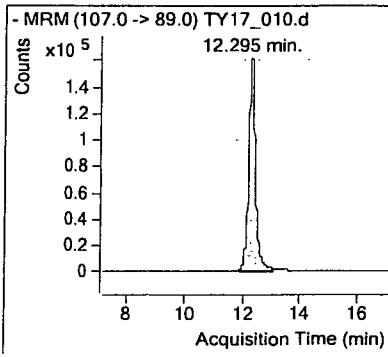
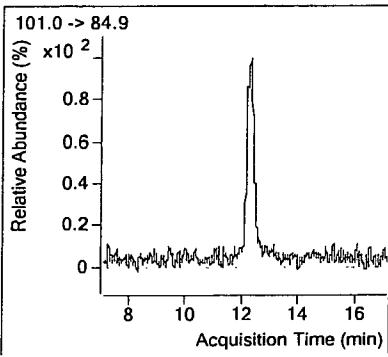
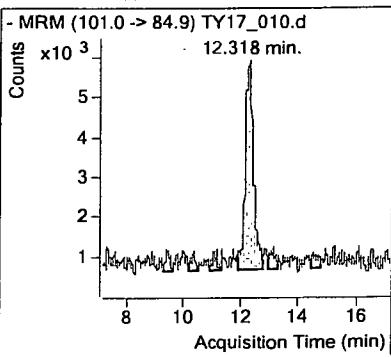


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.281	301652	2750559
Perchlorate_102	PER_IS_108	12.318	99865	2750559

Perchlorate_100



Perchlorate_102



SECOND SOURCE CALIBRATION VERIFICATION SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: TY17_011.d

Date (s) of Analysis From:11/17/15 To:11/17/15 Time (s) of Analysis From:18:09 To:20:00				Date of Analysis: 11/17/15 Time of Analysis: 20:38 Standard Id: PER_SS (Standard) 0.002 ug/ml			
COMPOUND	RT	RT WINDOW FROM: TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	11.92	11.82	12.02	12.30	1.244252	N	12.4
Perchlorate_85	11.91	11.81	12.01	12.33	0.395407	N	13.9

FILE ID : TQCK1711.RFB

Data File ID: TY17_011.d

Date Injected : 11/17/15

Time Injected : 20:38

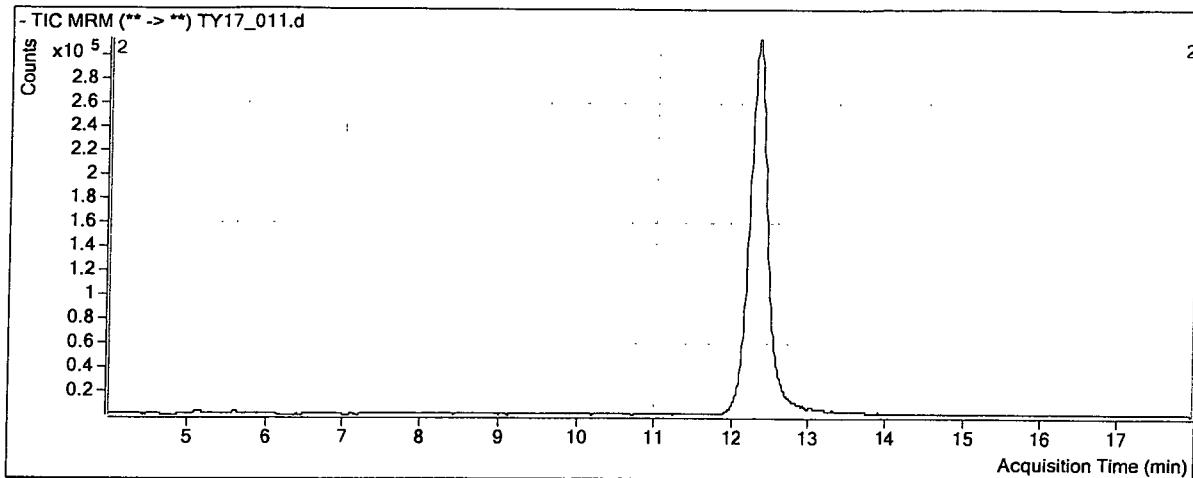
Sample ID : PER_SS 0.002 ug/ml 11/06/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
12.305	3287065	PER_IS_89
12.301	1635975	Perchlorate_83
12.329	519891	Perchlorate_85

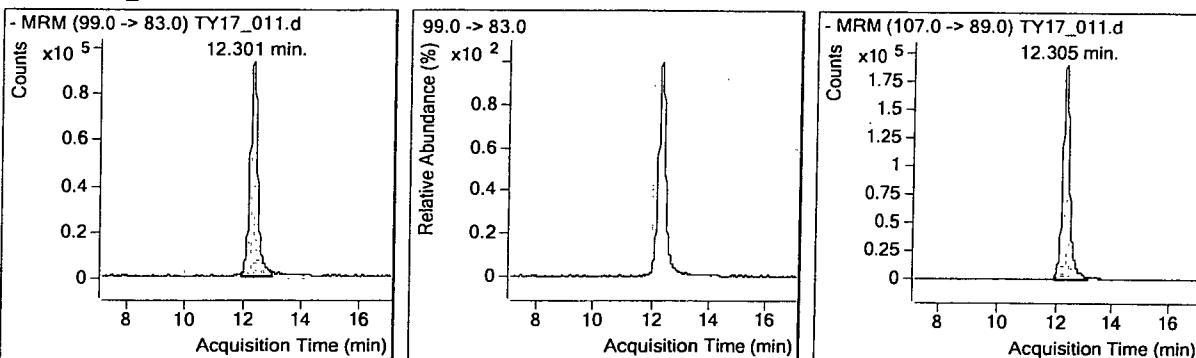
Quantitative Analysis Sample Report

Batch Data Path D:\MassHunter\Data\151117\QuantResults\151117_A_MI.batch.bin
Instrument LCMS QQQ **Operator** ba
Data File TY17_011.d **Sample Name** PER_SS 0.002 ug/ml 11/06/15
Sample Type Sample **Acq Date** 11/17/15
Acq Method 6460_ESI_PER_N_NEWER_K'_COLUMN.m **Acq Time** 20:38
ClientID NA **Inj Vol** 20

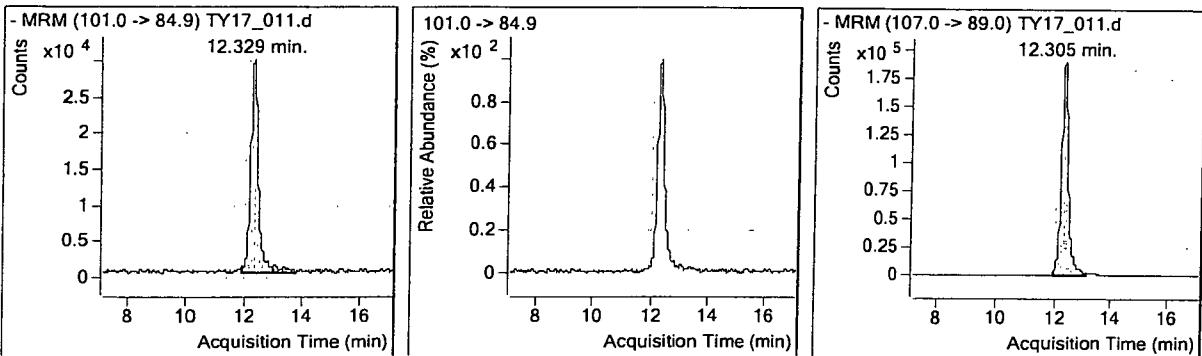


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.301	1635975	3287065
Perchlorate_102	PER_IS_108	12.329	519891	3287065

Perchlorate_100



Perchlorate_102



CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: TY17_013.d

Date (s) of Analysis From:11/17/15 To:11/17/15 Time (s) of Analysis From:18:09 To:20:56				Date of Analysis: 11/17/15 Time of Analysis: 21:15 Standard Id: PER_CCV_1 (Standard) 0.0004ug/ml			
COMPOUND	RT	RT WINDOW FROM■ TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	11.92	11.82	12.02	12.32	1.420233	N	8.1
Perchlorate_85	11.91	11.81	12.01	12.31	0.459439	N	0.8

FILE ID : TQCK1713.RFB

Data File ID: TY17_013.d

Date Injected : 11/17/15

Time Injected : 21:15

Sample ID : PER_CCV_1 0.0004 ug/ml 11/07/15

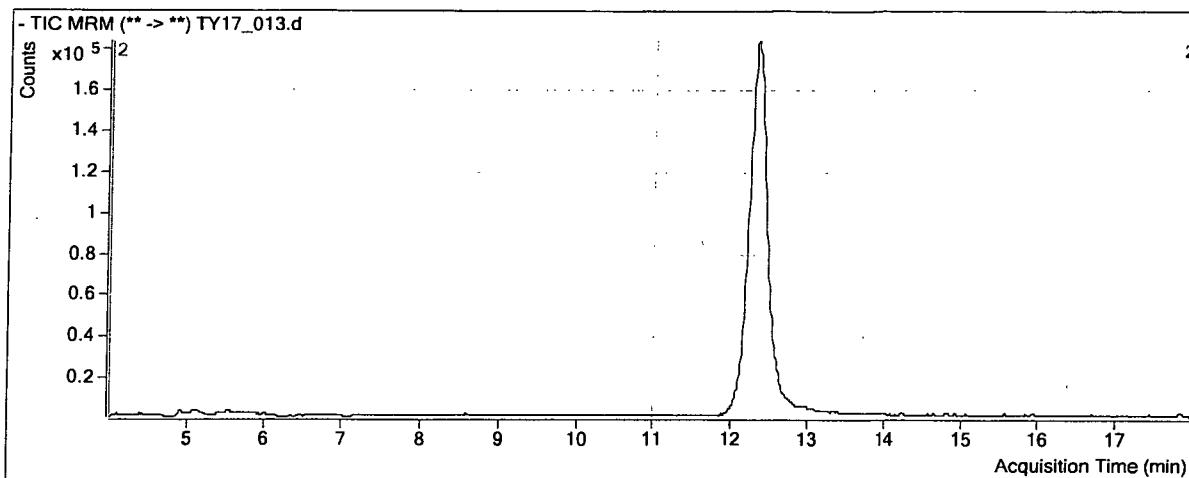
Client ID : NA

Retention Time	Area Count Response	Compound ID Product Ion
12.315	2802196	PER_IS_89
12.322	292748	Perchlorate_83
12.308	102159	Perchlorate_85

Quantitative Analysis Sample Report

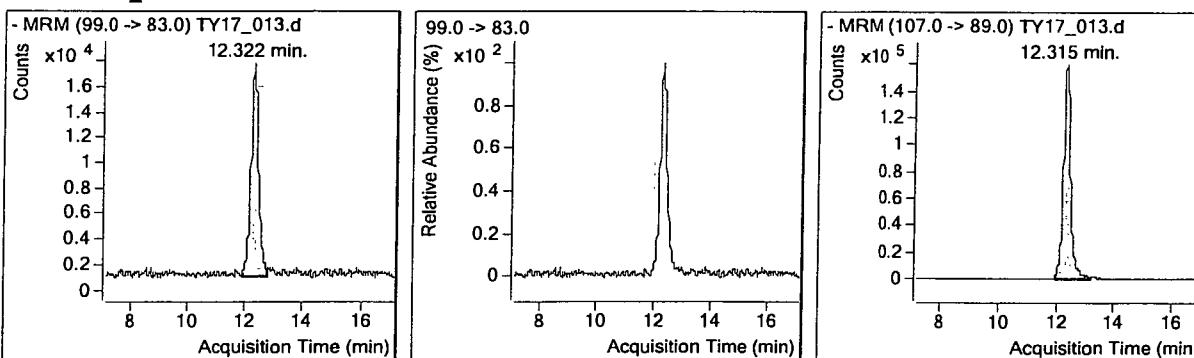
Batch Data Path D:\MassHunter\Data\151117\QuantResults\151117_A_MI.batch.bin

Instrument	LCMS QQQ	Operator	ba
Data File	TY17_013.d	Sample Name	PER_CCV_1 0.0004 ug/ml 11/07/15
Sample Type	Sample	Acq Date	11/17/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	Acq Time	21:15
ClientID	NA	Inj Vol	20

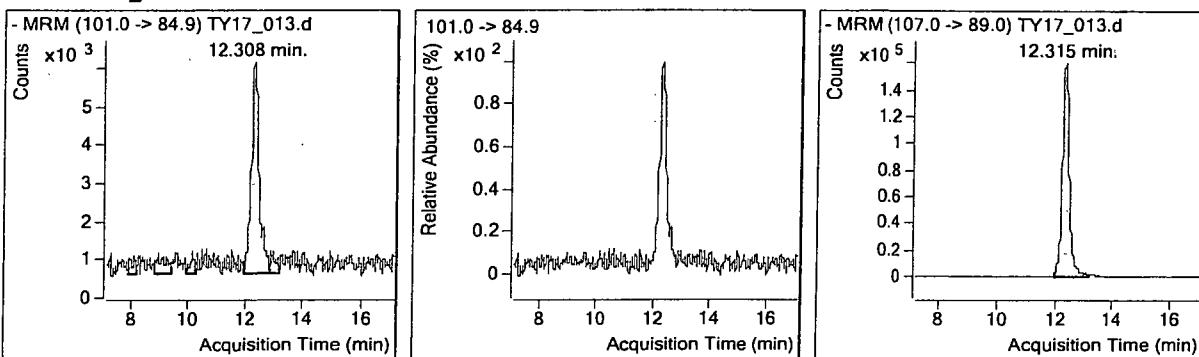


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.322	292748	2802196
Perchlorate_102	PER_IS_108	12.308	102159	2802196

Perchlorate_100



Perchlorate_102



CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: TY17_014.d

Date (s) of Analysis From:11/17/15 To:11/17/15 Time (s) of Analysis From:18:09 To:20:56				Date of Analysis: 11/17/15 Time of Analysis: 21:34 Standard Id: PER CCV_1 (Standard) 0.002 ug/ml			
COMPOUND	RT	RT WINDOW FROM TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	11.92	11.82	12.02	12.33	1.420233	N	2.3
Perchlorate_85	11.91	11.81	12.01	12.34	0.459439	N	2.3

FILE ID : TQCK1714.RFB

Data File ID: TY17_014.d

Date Injected : 11/17/15

Time Injected : 21:34

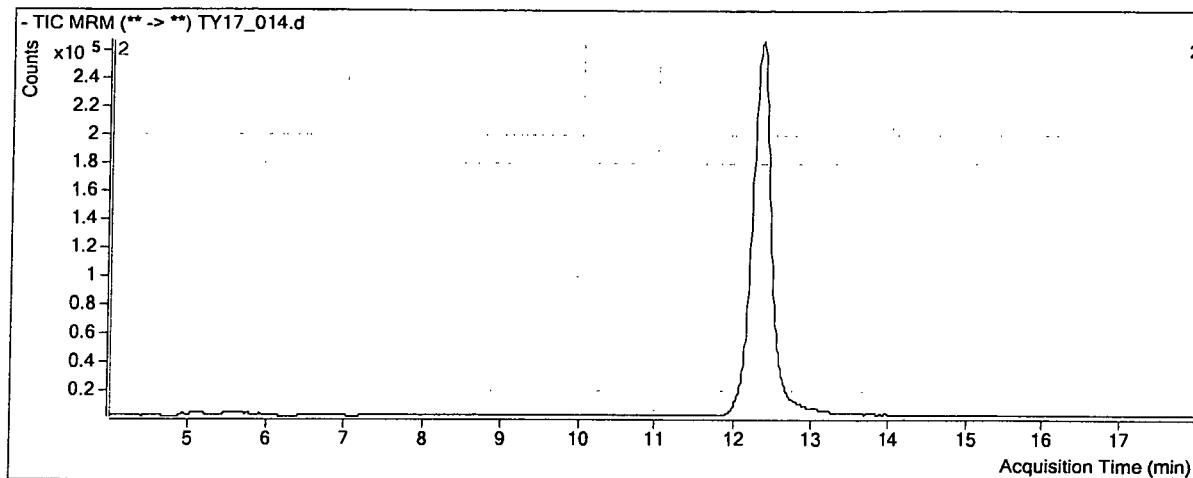
Sample ID : PER_CCV_1 0.002 ug/ml 11/07/15

Client ID : NA

Retention Time	Area Count Response	Compound ID Product Ion
12.325	2715494	PER_IS_89
12.332	1507792	Perchlorate_83
12.339	487453	Perchlorate_85

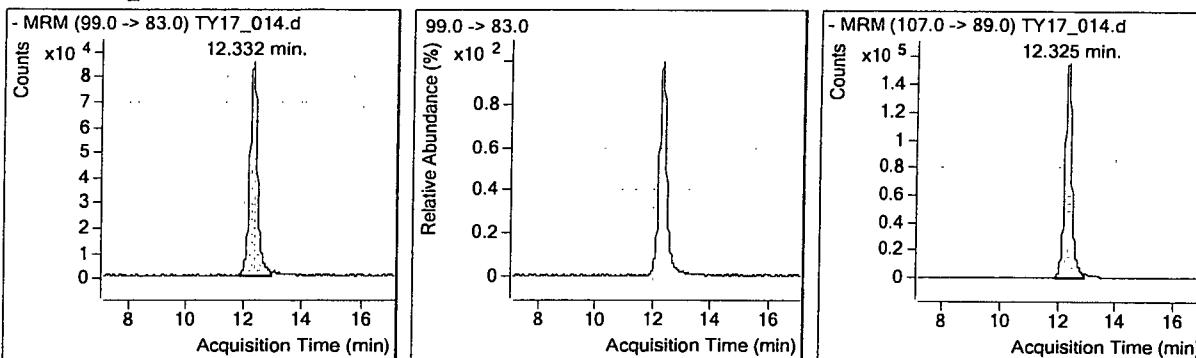
Quantitative Analysis Sample Report

Batch Data Path D:\MassHunter\Data\151117\QuantResults\151117_A_MI.batch.bin
Instrument LCMS QQQ **Operator** ba
Data File TY17_014.d **Sample Name** PER_CCV_1 0.002 ug/ml 11/07/15
Sample Type Sample **Acq Date** 11/17/15
Acq Method 6460_ESI_PER_N_NEWER_K'.COLUMN.m **Acq Time** 21:34
ClientID NA **Inj Vol** 20

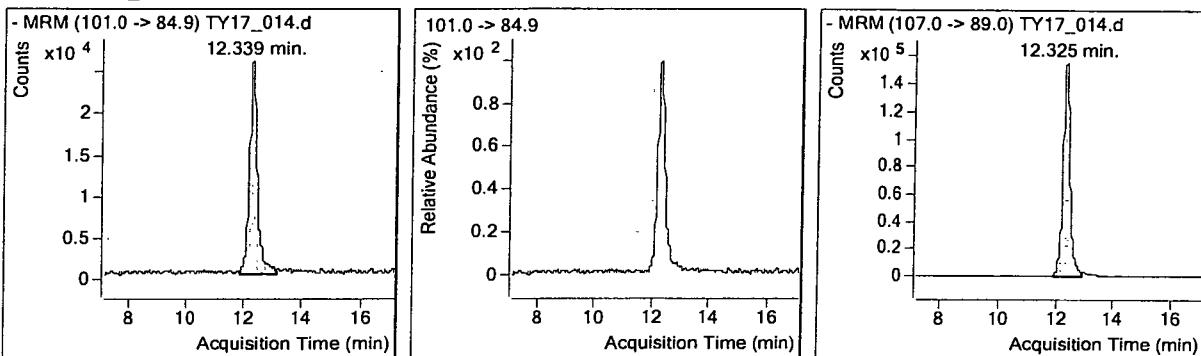


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.332	1507792	2715494
Perchlorate_102	PER_IS_108	12.339	487453	2715494

Perchlorate_100



Perchlorate_102



CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: TY21_002.d

Date (s) of Analysis From:11/17/15 To:11/21/15 Time (s) of Analysis From:18:09 To:13:14				Date of Analysis: 11/21/15 Time of Analysis: 13:33 Standard Id: PER CCV_2 (Standard) 0.0004ug/ml			
COMPOUND	RT	RT WINDOW FROM■ TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	11.92	11.82	12.02	12.94	1.252357	N	11.8
Perchlorate_85	11.91	11.81	12.01	12.97	0.473849	N	3.1

FILE ID : TQCK2102.RFB

Data File ID: TY21_002.d

Date Injected : 11/21/15

Time Injected : 13:33

Sample ID : PER_CCV_2 0.0004 ug/ml 11/07/15

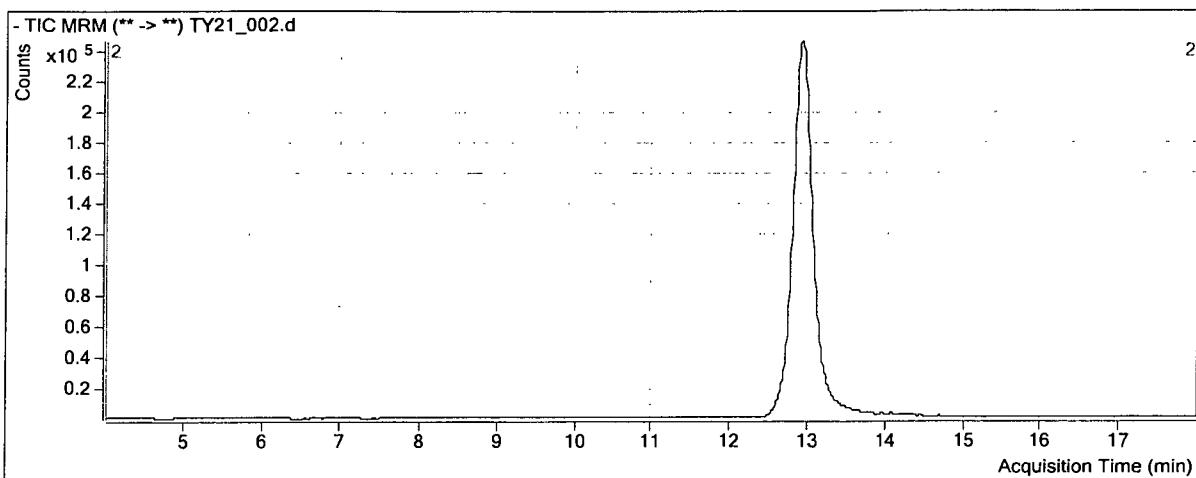
Client ID : NA

Retention Time	Area Count	Compound_ID
	Response	Product_Ion
12.926	3958615	PER_IS_89
12.943	396608	Perchlorate_83
12.971	150063	Perchlorate_85

Quantitative Analysis Sample Report

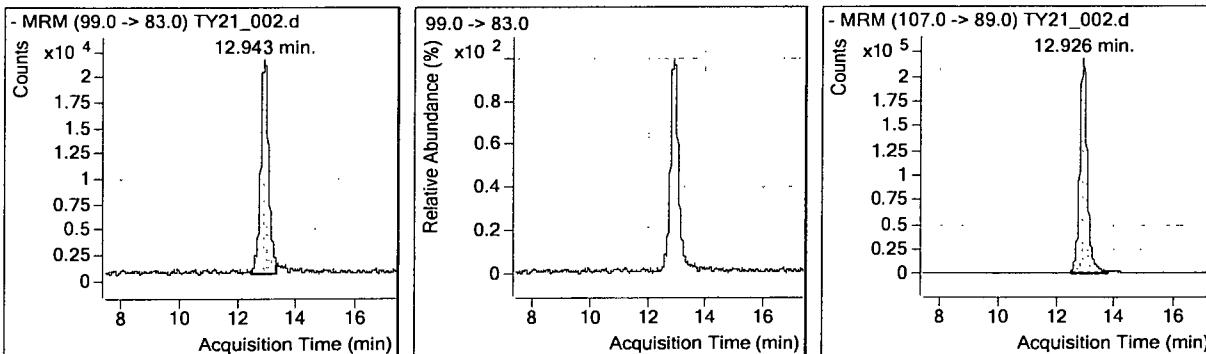
Batch Data Path D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument	LCMS QQQ	Operator	ba
Data File	TY21_002.d	Sample Name	PER_CCV_2 0.0004 ug/ml 11/07/15
Sample Type	Sample	Acq Date	11/21/15
Acq Method	6460_ESI_PER_N_NEWER_K_COLUMN.m	Acq Time	13:33
ClientID	NA	Inj Vol	20

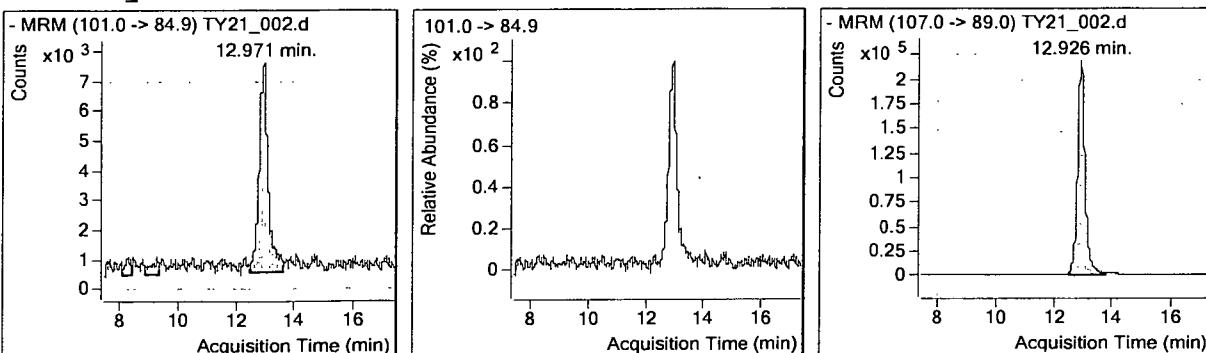


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.943	396608	3958615
Perchlorate_102	PER_IS_108	12.971	150063	3958615

Perchlorate_100



Perchlorate_102



CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: TY21_003.d

Date (s) of Analysis From:11/17/15 To:11/21/15 Time (s) of Analysis From:18:09 To:13:14				Date of Analysis: 11/21/15 Time of Analysis: 13:51 Standard Id: PER CCV_2 (Standard) 0.002 ug/ml			
COMPOUND	RT	RT WINDOW FROM TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	11.92	11.82	12.02	12.95	1.420233	N	3.3
Perchlorate_85	11.91	11.81	12.01	12.95	0.459439	N	9.8

FILE ID : TQCK2103.RFB

Data File ID: TY21_003.d

Date Injected : 11/21/15

Time Injected : 13:51

Sample ID : PER_CCV_2 0.002 ug/ml 11/07/15

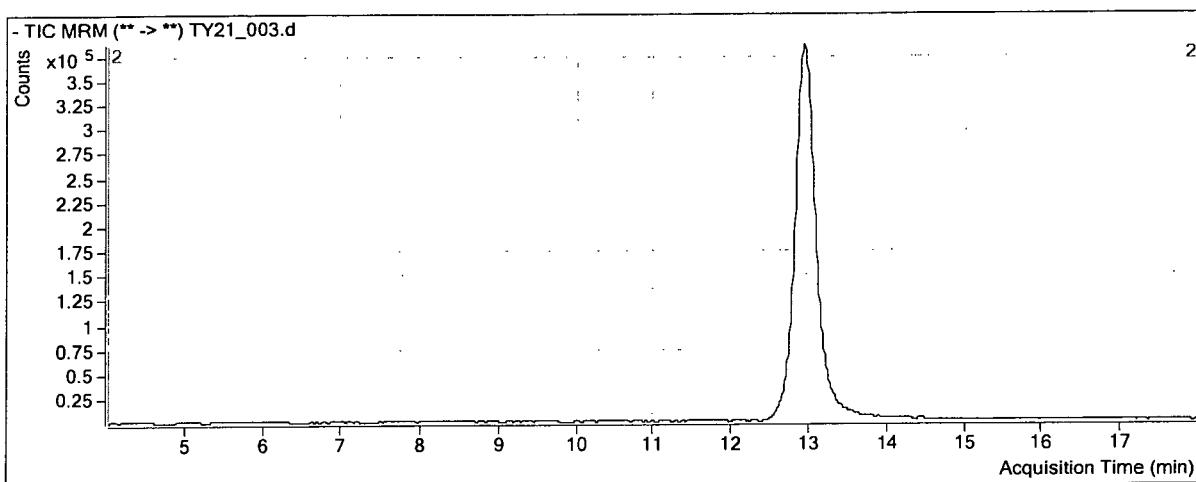
Client ID : NA

Retention Time	Area Count	Compound_ID
	Response	Product Ion
12.937	4189953	PER_IS_89
12.954	2300891	Perchlorate_83
12.900	694682	Perchlorate_85

Quantitative Analysis Sample Report

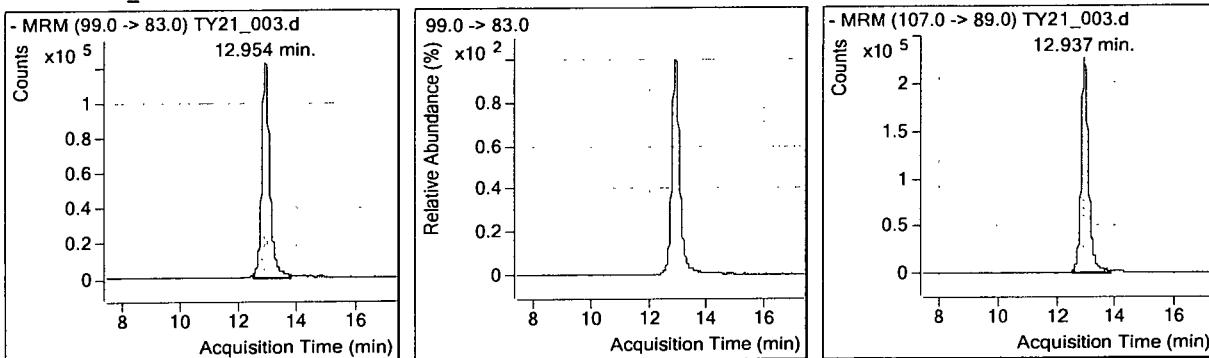
Batch Data Path D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument	LCMS QQQ	Operator	ba
Data File	TY21_003.d	Sample Name	PER_CCV_2 0.002 ug/ml 11/07/15
Sample Type	Sample	Acq Date	11/21/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	Acq Time	13:51
ClientID	NA	Inj Vol	20

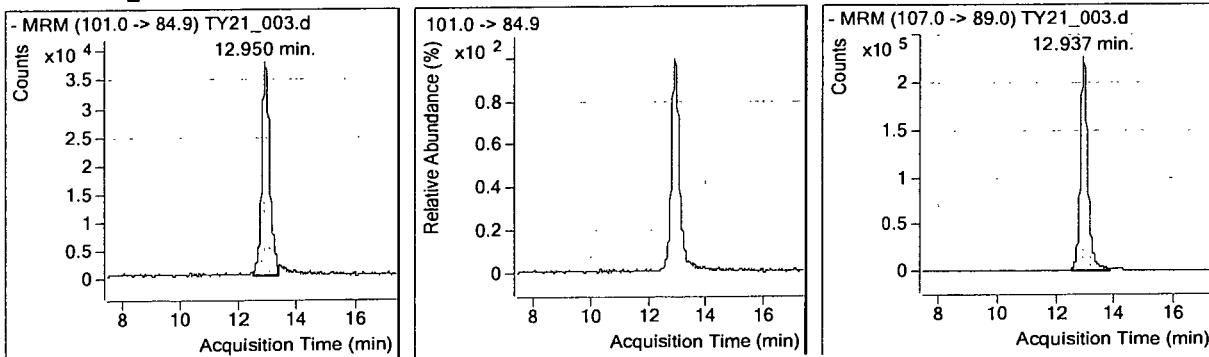


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.954	2300891	4189953
Perchlorate_102	PER_IS_108	12.950	694682	4189953

Perchlorate_100



Perchlorate_102



CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: TY21_012.d

	Date (s) of Analysis From:11/17/15 To:11/21/15	Date of Analysis: 11/21/15					
	Time (s) of Analysis From:18:09 To:16:15	Time of Analysis: 16:53					
		Standard Id: PER CCV 2 (Standard) 0.0004ug/ml					
COMPOUND	RT	RT WINDOW FROM TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	11.92	11.82	12.02	13.23	1.272361	N	10.4
Perchlorate_85	11.91	11.81	12.01	13.20	0.448861	N	2.3

FILE ID : TQCK2112.RFB

Data File ID: TY21_012.d

Date Injected : 11/21/15

Time Injected : 16:53

Sample ID : PER_CCV_2 0.0004 ug/ml 11/07/15

Client ID : NA

Retention Time	Area Count	Compound_ID
	Response	Product Ion
13.212	4246023	PER_IS_89
13.229	432198	Perchlorate_83
13.195	152470	Perchlorate_85

Quantitative Analysis Sample Report

Batch Data Path D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument LCMS QQQ

Operator ba

Data File TY21_012.d

Sample Name PER_CCV_2 0.0004 ug/ml 11/07/15

Sample Type Sample

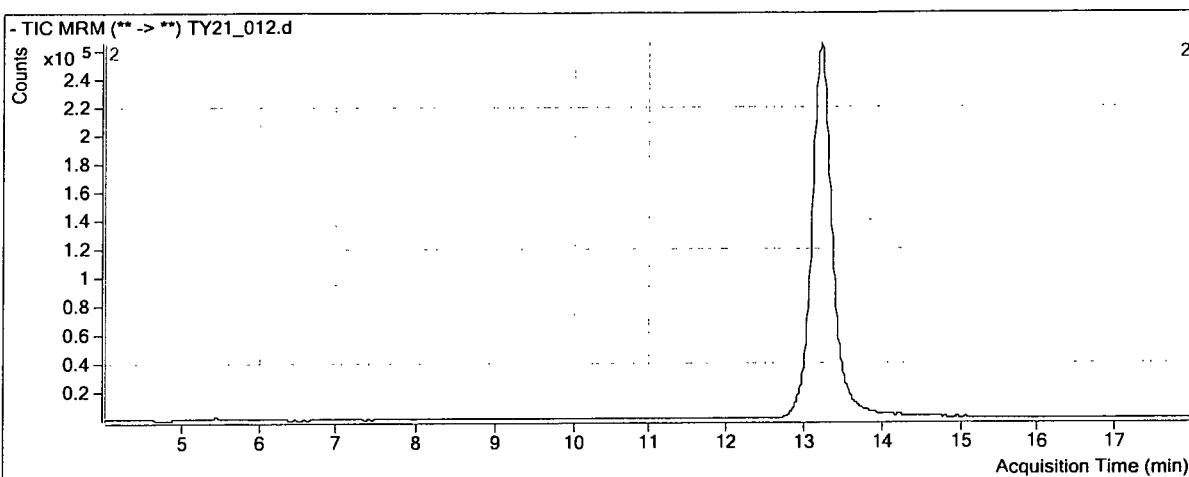
Acq Date 11/21/15

Acq Method 6460_ESI_PER_N_NEWER_K' COLUMN.m

Acq Time 16:53

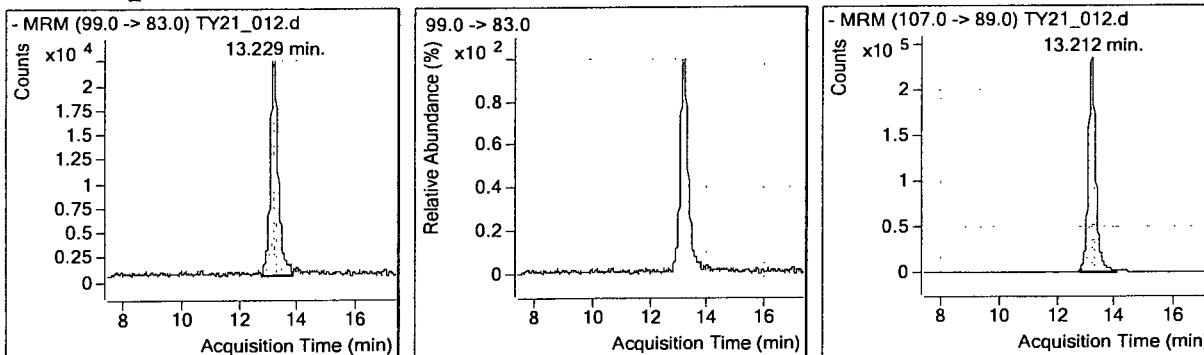
ClientID NA

Inj Vol 20

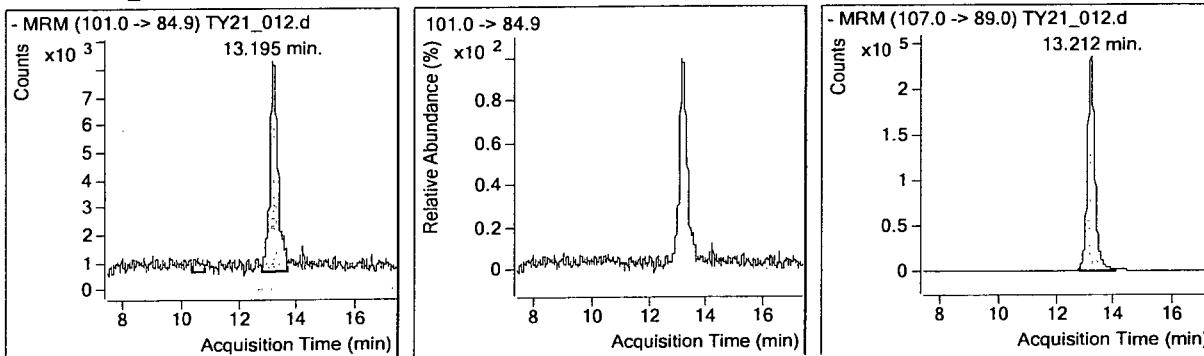


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.229	432198	4246023
Perchlorate_102	PER_IS_108	13.195	152470	4246023

Perchlorate_100



Perchlorate_102



CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: TY21_013.d

Date (s) of Analysis From:11/17/15 To:11/21/15 Time (s) of Analysis From:18:09 To:16:15				Date of Analysis: 11/21/15 Time of Analysis: 17:11 Standard Id: PER CCV 2 (Standard) 0.002 ug/ml				
COMPOUND	RT	RT WINDOW FROM	TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	11.92	11.82	12.02	1.420233	13.29	1.401758	N	1.3
Perchlorate_85	11.91	11.81	12.01	0.459439	13.28	0.438955	N	4.5

FILE ID : TQCK2113.RFB

Data File ID: TY21_013.d

Date Injected : 11/21/15

Time Injected : 17:11

Sample ID : PER_CCV_2 0.002 ug/ml 11/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.252	4188650	PER_IS_89
13.200	2348590	Perchlorate_83
13.276	735451	Perchlorate_85

Quantitative Analysis Sample Report

Batch Data Path D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument LCMS QQQ

Data File TY21_013.d

Sample Type Sample

Acq Method 6460_ESI_PER_N_NEWER_K'.COLUMN.m

ClientID NA

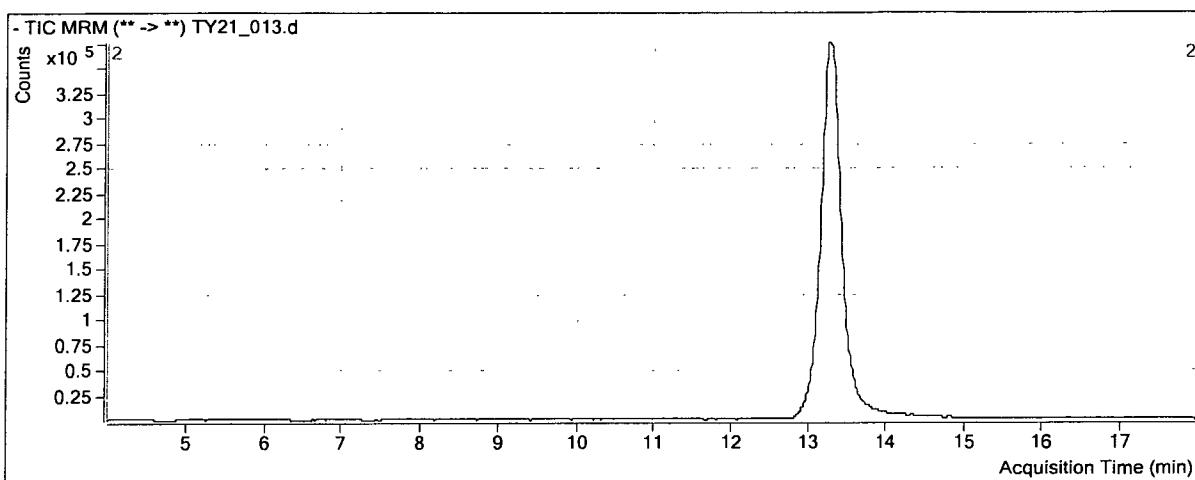
Operator ba

Sample Name PER_CCV_2 0.002 ug/ml 11/07/15

Acq Date 11/21/15

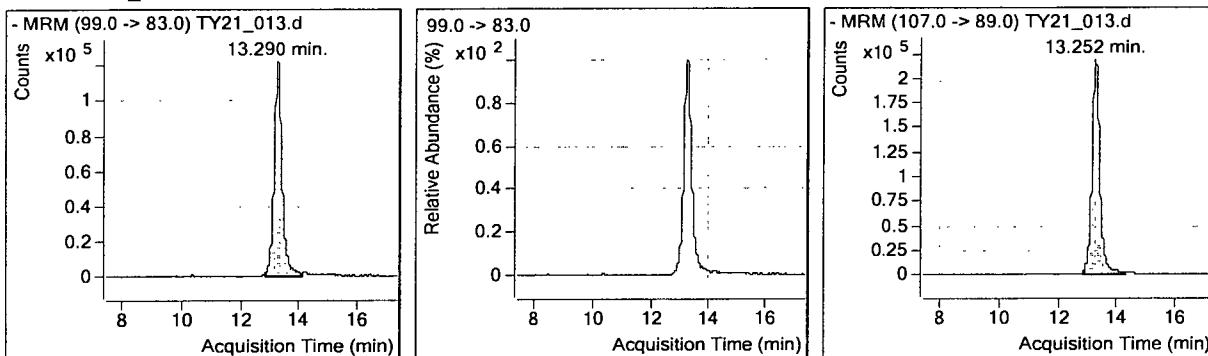
Acq Time 17:11

Inj Vol 20

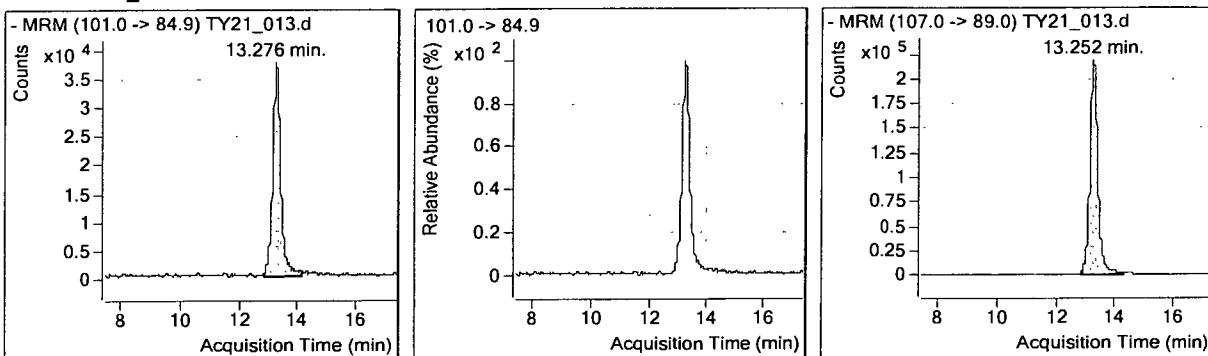


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.290	2348590	4188650
Perchlorate_102	PER_IS_108	13.276	735451	4188650

Perchlorate_100



Perchlorate_102



CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: TY21_021.d

Date (s) of Analysis From:11/17/15 To:11/21/15 Time (s) of Analysis From:18:09 To:19:03				Date of Analysis: 11/21/15 Time of Analysis: 19:40 Standard Id: PER CCV_2 (Standard) 0.0004ug/ml			
COMPOUND	RT	RT WINDOW FROM= TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	11.92	11.82	12.02	13.64	1.307532	N	7.9
Perchlorate_85	11.91	11.81	12.01	13.63	0.410605	N	10.6

FILE ID : TQCK2121.RFB

Data File ID: TY21_021.d

Date Injected : 11/21/15

Time Injected : 19:40

Sample ID : PER_CCV_2 0.0004 ug/ml 11/07/15

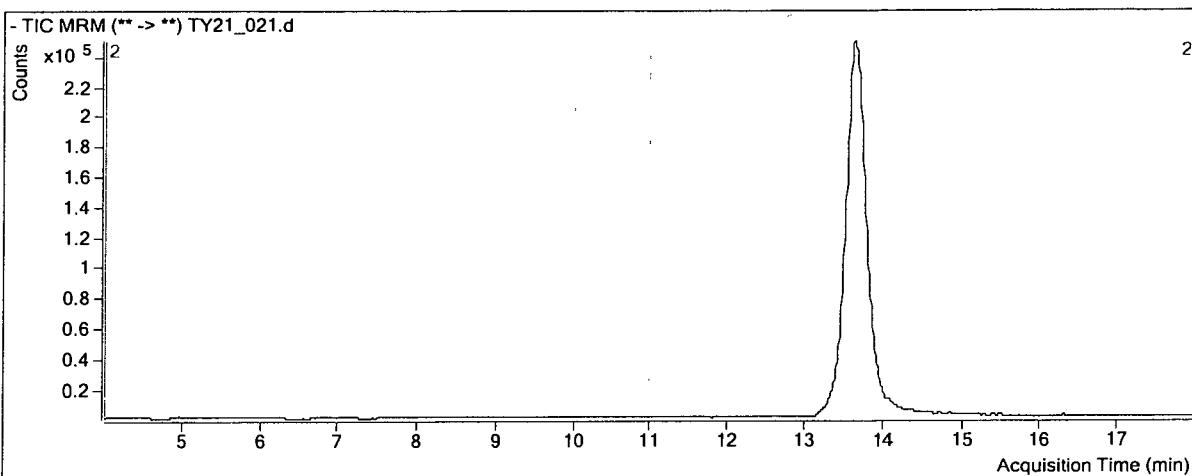
Client ID : NA

Retention Time	Area Count	Compound_ID
	Response	Product Ion
13.629	4178312	PER_IS_89
13.636	437062	Perchlorate_83
13.633	137251	Perchlorate_85

Quantitative Analysis Sample Report

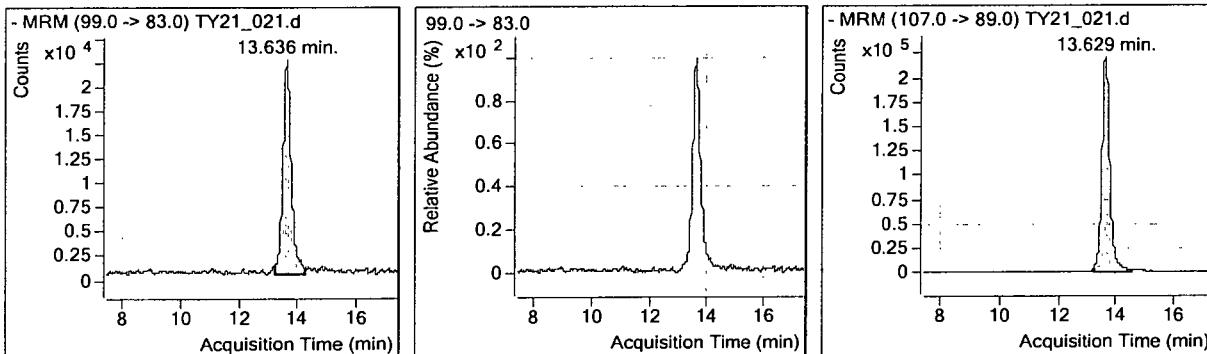
Batch Data Path D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument	LCMS QQQ	Operator	ba
Data File	TY21_021.d	Sample Name	PER_CCV_2 0.0004 ug/ml 11/07/15
Sample Type	Sample	Acq Date	11/21/15
Acq Method	6460_ESI_PER_N_NEWER_K' COLUMN.m	Acq Time	19:40
ClientID	NA	Inj Vol	20

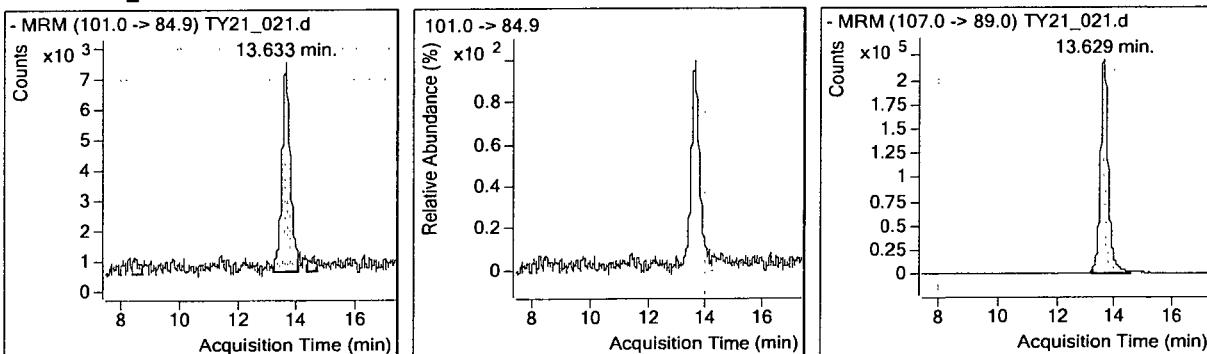


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.636	437062	4178312
Perchlorate_102	PER_IS_108	13.633	137251	4178312

Perchlorate_100



Perchlorate_102



CONTINUING CALIBRATION CHECK SUMMARY FORM

Lab Name: APPL Inc.

Detector ID: Agilent 6460 Triple Quad LC/MS DATA FILE ID: TY21_022.d

Date (s) of Analysis From:11/17/15 To:11/21/15 Time (s) of Analysis From:18:09 To:19:03				Date of Analysis: 11/21/15 Time of Analysis: 19:59 Standard Id: PER CCV_2 (Standard) 0.002 ug/ml			
COMPOUND	RT	RT WINDOW FROM# TO	AVERAGE RELATIVE RESPONSE FACTOR	RT	CALCULATED RELATIVE RESPONSE FACTOR	QNT Y/N	%D
Perchlorate_83	11.92	11.82	12.02	13.72	1.373147	N	3.3
Perchlorate_85	11.91	11.81	12.01	13.71	0.424799	N	7.5

FILE ID : TQCK2122.RFB

Data File ID: TY21_022.d

Date Injected : 11/21/15

Time Injected : 19:59

Sample ID : PER_CCV_2 0.002 ug/ml 11/07/15

Client ID : NA

Retention Time	Area Count Response	Compound_ID Product Ion
13.711	4156089	PER_IS_89
13.718	2282768	Perchlorate_83
13.714	706201	Perchlorate_85

Quantitative Analysis Sample Report

Batch Data Path D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument LCMS QQQ

Data File TY21_022.d

Sample Type Sample

Acq Method 6460_ESI_PER_N_NEWER_K'.COLUMN.m

ClientID NA

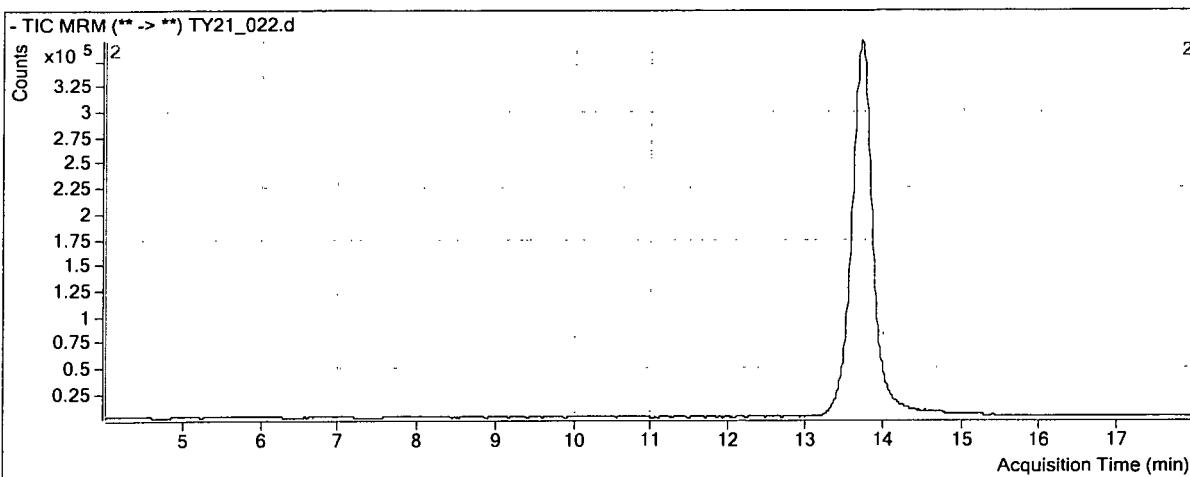
Operator ba

Sample Name PER_CCV_2 0.002 ug/ml 11/07/15

Acq Date 11/21/15

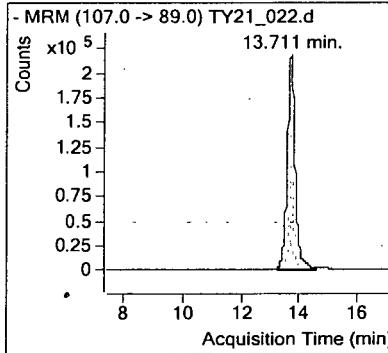
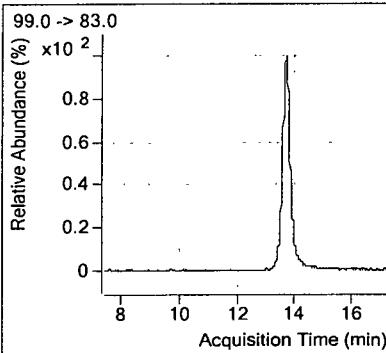
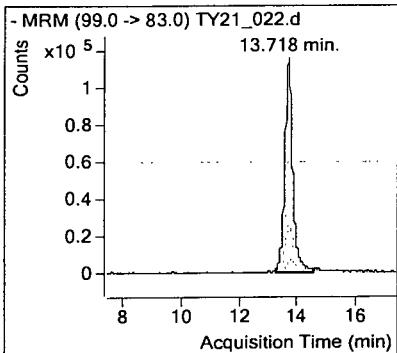
Acq Time 19:59

Inj Vol 20

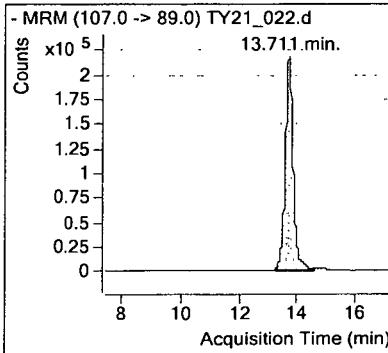
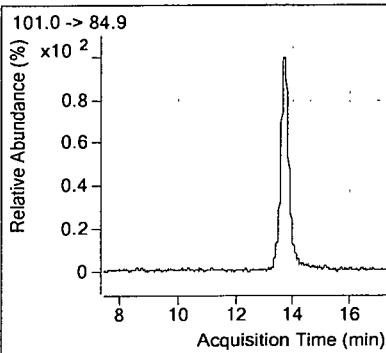
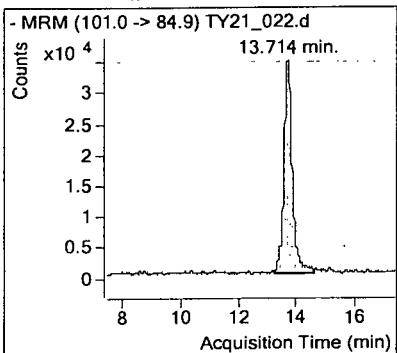


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.718	2282768	4156089
Perchlorate_102	PER_IS_108	13.714	706201	4156089

Perchlorate_100



Perchlorate_102



**EPA METHOD 6850
Perchlorate
LC/MS**

Raw Data

APPL, INC.

Method Blank
PERCHLORATE EPA 6850 - SOIL

Blank Name/QCG: **151119S-24401 - 202876**
Batch ID: #6850SM-151119A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PERCHLORATE	0.0040 U	0.006	0.0040	0.0020	mg/Kg	11/19/15	11/21/15

Quant Method: QTLMFL2
Run #: TY21_007.d
Instrument: AGIL_6460
Sequence: TQ112115
Initials: RP

GC SC-Blank-REG MDLs-DOD
Printed: 12/07/15 8:22:46 AM

Data File ID: TY21_007.d

Date Injected : 11/21/15

Time Injected : 15:20

Sample ID : 151119SBLKA 9837.7 DF 11/19/15

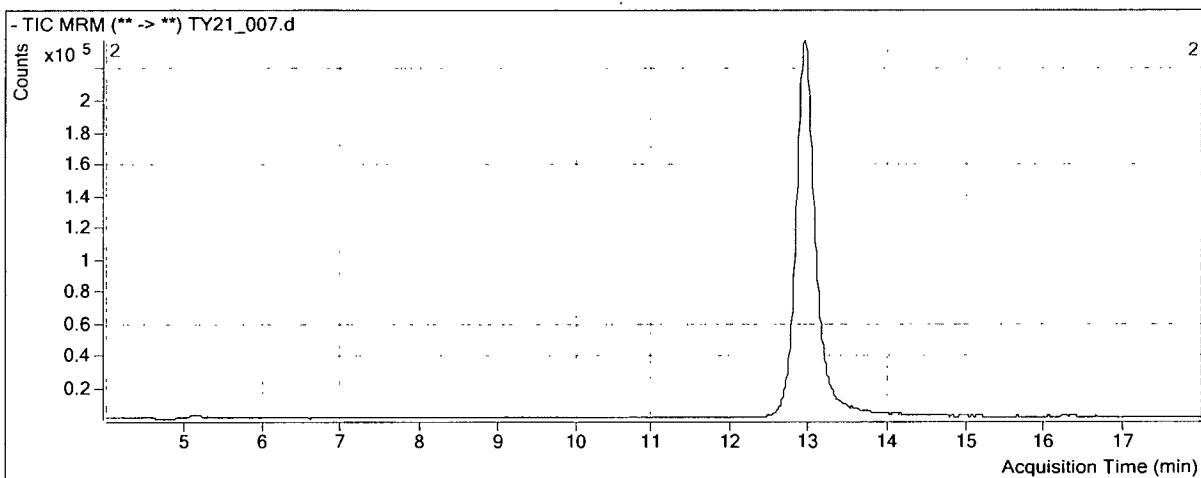
Client ID : LAB_CNTL_S_BLKA

Retention Time	Area Count Response	Compound ID Product Ion
12.957	4152009	PER_IS_89
12.515	2275 Perchlorate_83	(2275 * 0.0050) / (1.42 * 4152009.00) * 9837.70 = 0.018977 ppb
12.543	5167 Perchlorate_85	(5167 * 0.0050) / (0.46 * 4152009.00) * 9837.70 = 0.133234 ppb

Quantitative Analysis Sample Report

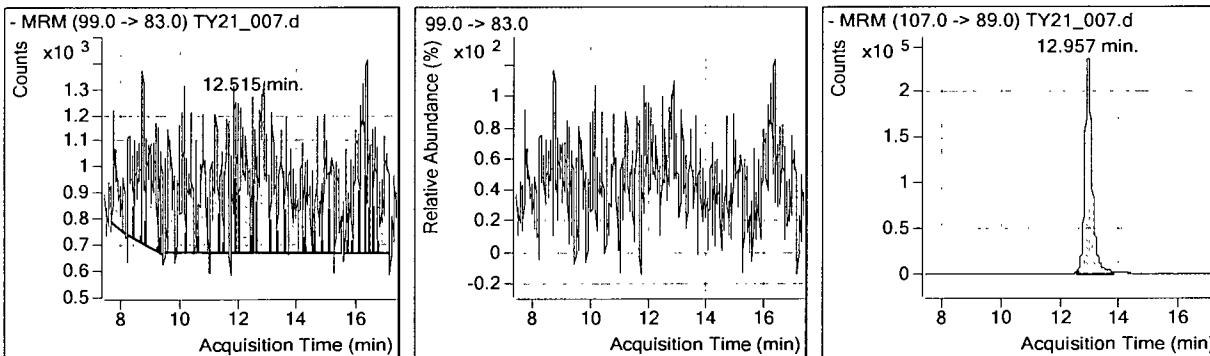
Batch Data Path D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument	LCMS QQQ	Operator	ba
Data File	TY21_007.d	Sample Name	151119SBLKA 9837.7 DF 11/19/15
Sample Type	Sample	Acq Date	11/21/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	Acq Time	15:20
ClientID	LAB_CNTL_S_BLKA	Inj Vol	20

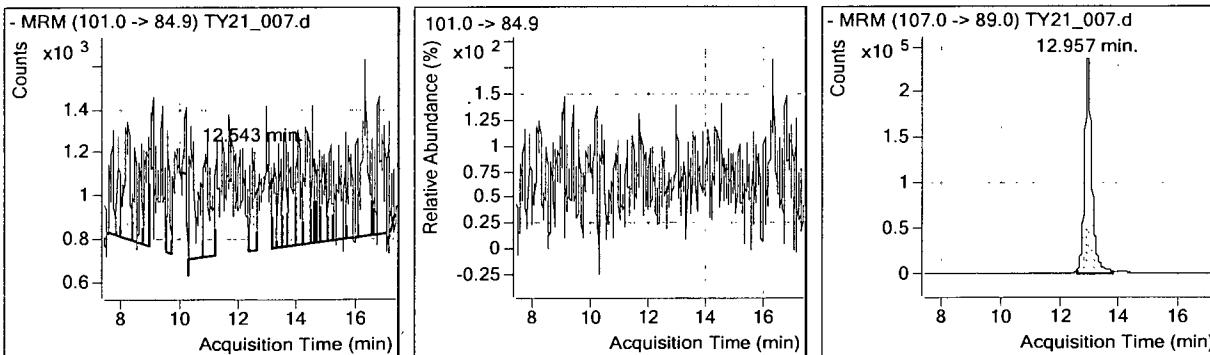


Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.515	2275	4152009
Perchlorate_102	PER_IS_108	12.543	5167	4152009

Perchlorate_100



Perchlorate_102



Laboratory Control Spike Recovery
PERCHLORATE EPA 6850 - SOIL

APPL ID: 151119S-24401 LCS - 202876

Batch ID: #6850SM-151119A

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Level mg/Kg	SPK Result mg/Kg	SPK % Recovery	Recovery Limits
PERCHLORATE	0.00594	0.00501	84.3	80-120

Comments: _____

Primary	SPK
Quant Method :	QTLMFL2
Extraction Date :	11/19/15
Analysis Date :	11/21/15
Instrument :	AGIL_6460
Run :	TY21_005.d
Initials :	RP

Printed: 12/07/15 8:22:37 AM
APPL Standard LCS

Data File ID: TY21_005.d

Date Injected : 11/21/15

Time Injected : 14:30

Sample ID : 151119SA_LCS-1 10422.1 DF 11/19/15

Client ID : LAB_CNTL_S_SPKA

Retention Time	Area Count Response	Compound ID Product Ion
12.957	4375974	PER_IS_89
12.964	597869	Perchlorate_83 (597869 * 0.0050) / (1.42 * 4375974.00) * 10422.10 = 5.012991 ppb
12.900	202106	Perchlorate_85 (202106 * 0.0050) / (0.46 * 4375974.00) * 10422.10 = 5.238439 ppb

$$= \frac{(10422.1)(597869)(0.005)}{(1.420233)(4375974)} = 5.012991$$

12/7/15
RP

Quantitative Analysis Sample Report

Batch Data Path

D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument

LCMS QQQ

Data File

TY21_005.d

Sample Type

Sample

Acq Method

6460_ESI_PER_N_NEWER_K'.COLUMN.m

ClientID

LAB_CNTL_S_SPKA

Operator

ba

Sample Name

151119SA_LCS-1 10422.1 DF 11/19/15

Acq Date

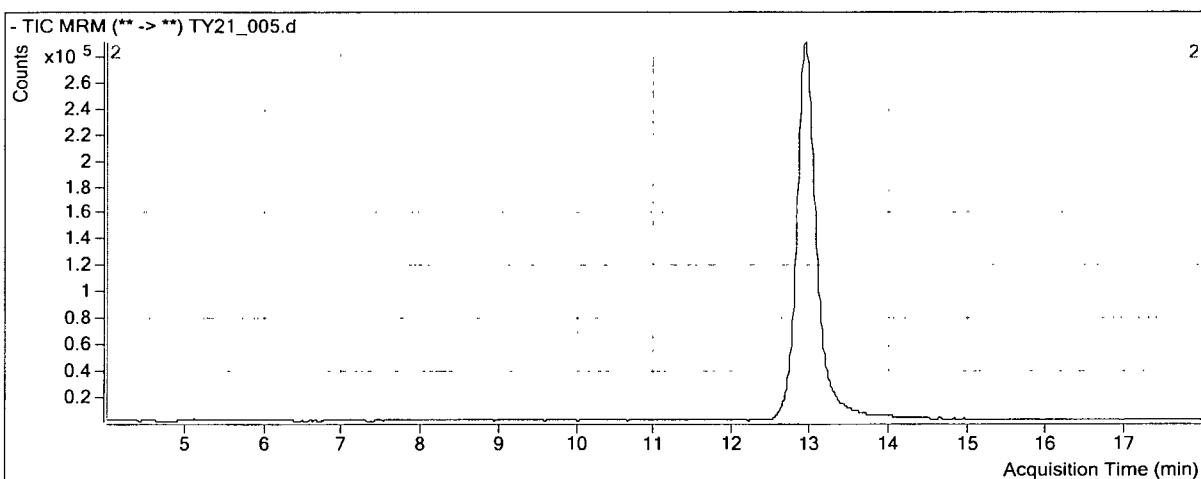
11/21/15

Acq Time

14:30

Inj Vol

20

**Compound****ISTD****RT****Resp****ISTD Resp**

Perchlorate_100

PER_IS_108

12.964

597869

4375974

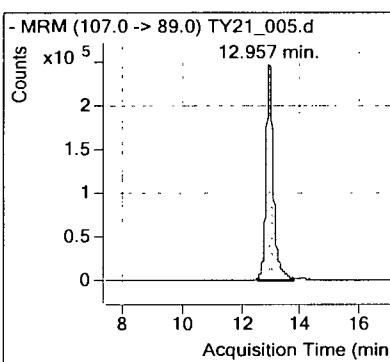
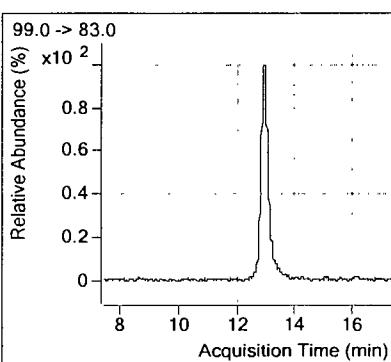
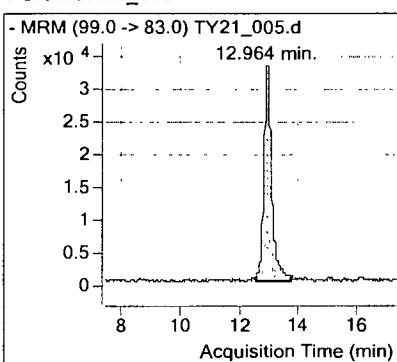
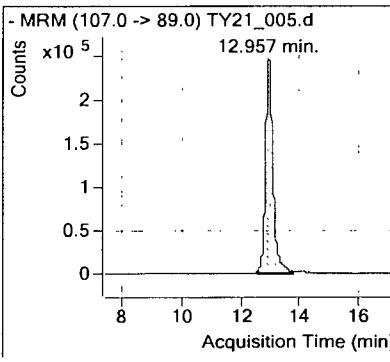
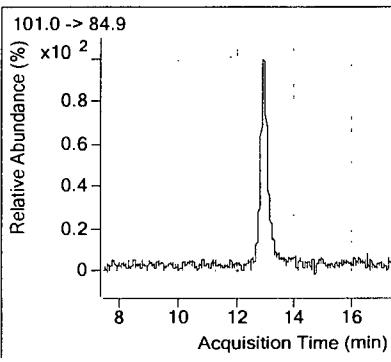
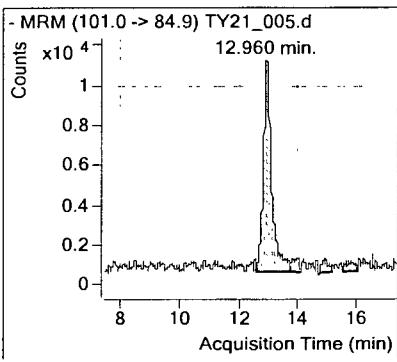
Perchlorate_102

PER_IS_108

12.960

202106

4375974

Perchlorate_100**Perchlorate_102**

Matrix Spike Recoveries
PERCHLORATE EPA 6850 - SOIL

APPL ID: **151119S-24401 MS - 202876**

Batch ID: #6850SM-151119A

Sample ID: AZ24401

Client ID: S67-SS53-0006

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	SPK Lvl	DUP Lvl	Matrix	SPK	DUP	SPK %	DUP %	Recovery	RPD	RPD
	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	Recovery	Recovery	Limits	%	Limits

(Solid Concentrations have been adjusted to reflect 18.6 Percent Moisture.)

PERCHLORATE	0.00326	0.00321	ND	0.00252	0.0023	77.3 #	71.7 #	80-120	7.5	15
-------------	---------	---------	----	---------	--------	--------	--------	--------	-----	----

= Recovery is outside QC limits.

Comments: _____

<u>Primary</u>	<u>SPK</u>	<u>DUP</u>
Quant Method :	QTLMFL2	QTLMFL2
Extraction Date :	11/19/15	11/19/15
Analysis Date :	11/21/15	11/21/15
Instrument :	AGIL_6460	AGIL_6460
Run :	TY21_018.d	TY21_019.d
Initials :	RP	

Printed: 12/07/15 8:22:34 AM

APPL MSD SCII

Data File ID: TY21_018.d

Date Injected : 11/21/15

Time Injected : 18:44

Sample ID : AZ24401_S03_MS-1 4657.7 DF 11/19/15

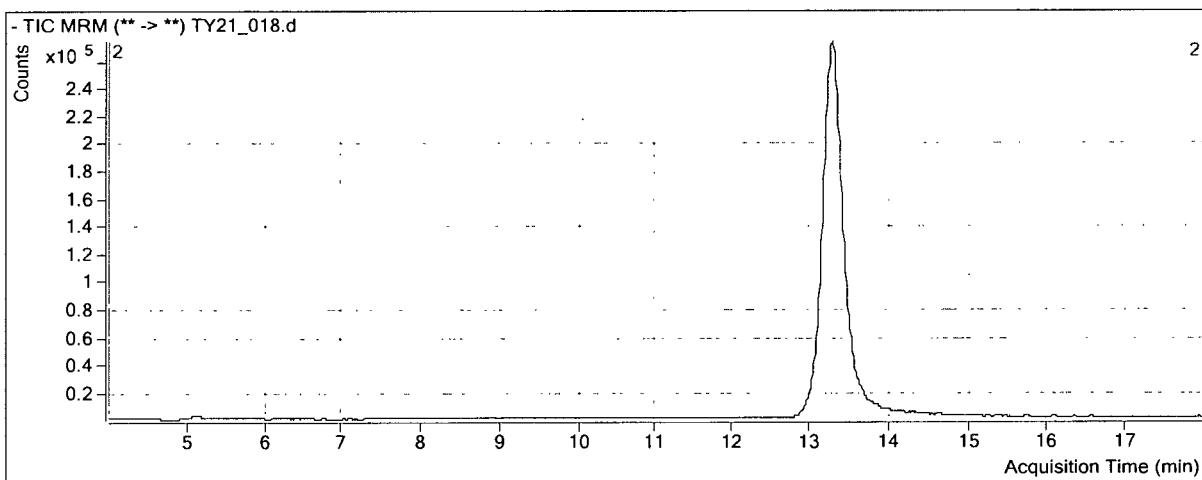
Client ID : S67-SS53-0006_MS-1

Retention Time	Area Count	Compound_ID
	Response	Product Ion
13.303	4485582	PER_IS_89
13.331	560347	Perchlorate_83 $(560347 * 0.0050) / (1.42 * 4485582.00) * 4657.70 = 2.048425 \text{ ppb}$
13.307	*	196197 Perchlorate_85 $(196197 * 0.0050) / (0.46 * 4485582.00) * 4657.70 = 2.217110 \text{ ppb}$

* MANUAL INTEGRATION

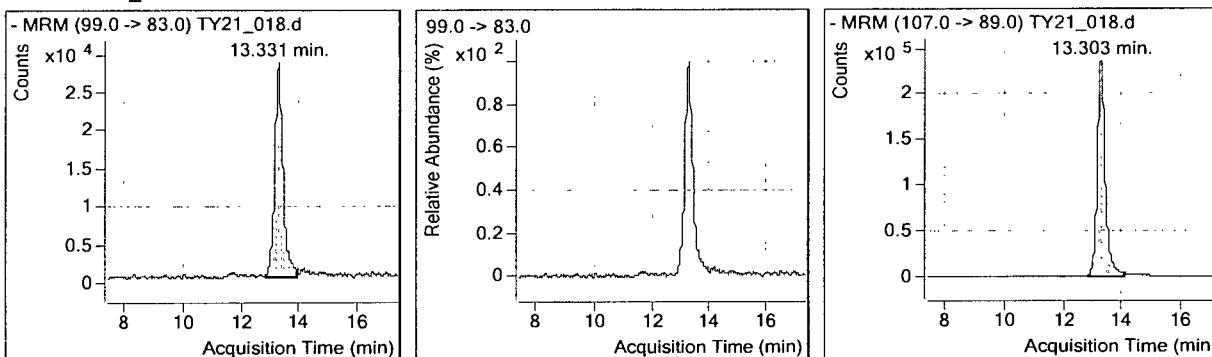
Quantitative Analysis Sample Report

Batch Data Path	D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin		
Instrument	LCMS QQQ	Operator	ba
Data File	TY21_018.d	Sample Name	AZ24401_S03_MS-1 4657.7 DF 11/19/15
Sample Type	Sample	Acq Date	11/21/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	Acq Time	18:44
ClientID	S67-SS53-0006_MS-1	Inj Vol	20

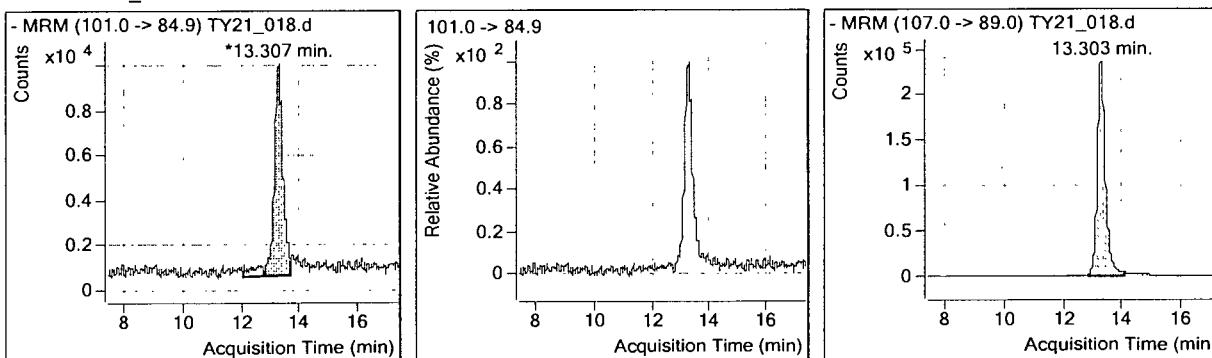


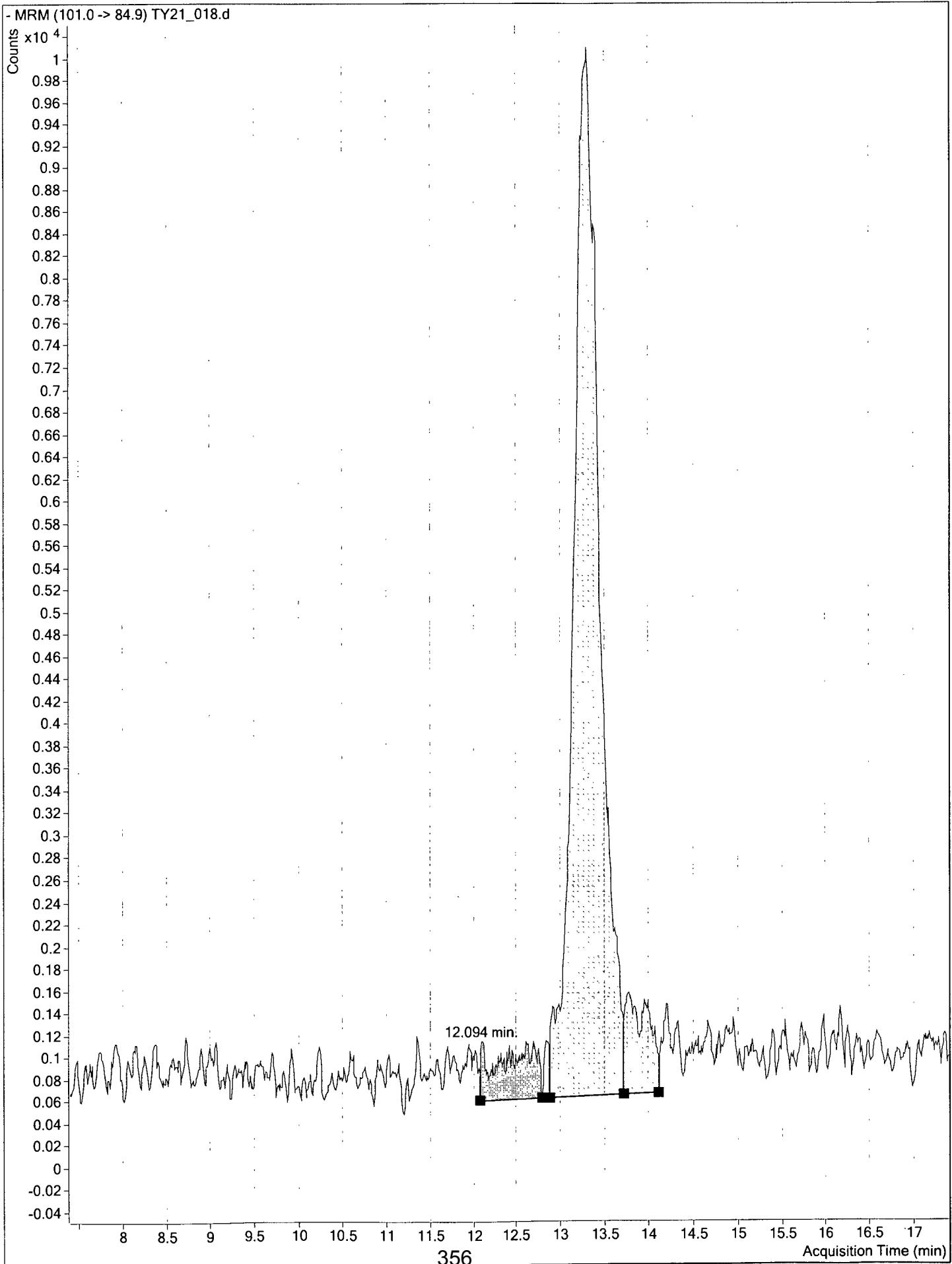
Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	13.331	560347	4485582
Perchlorate_102	PER_IS_108	*	13.307	196197 * MANUAL INT

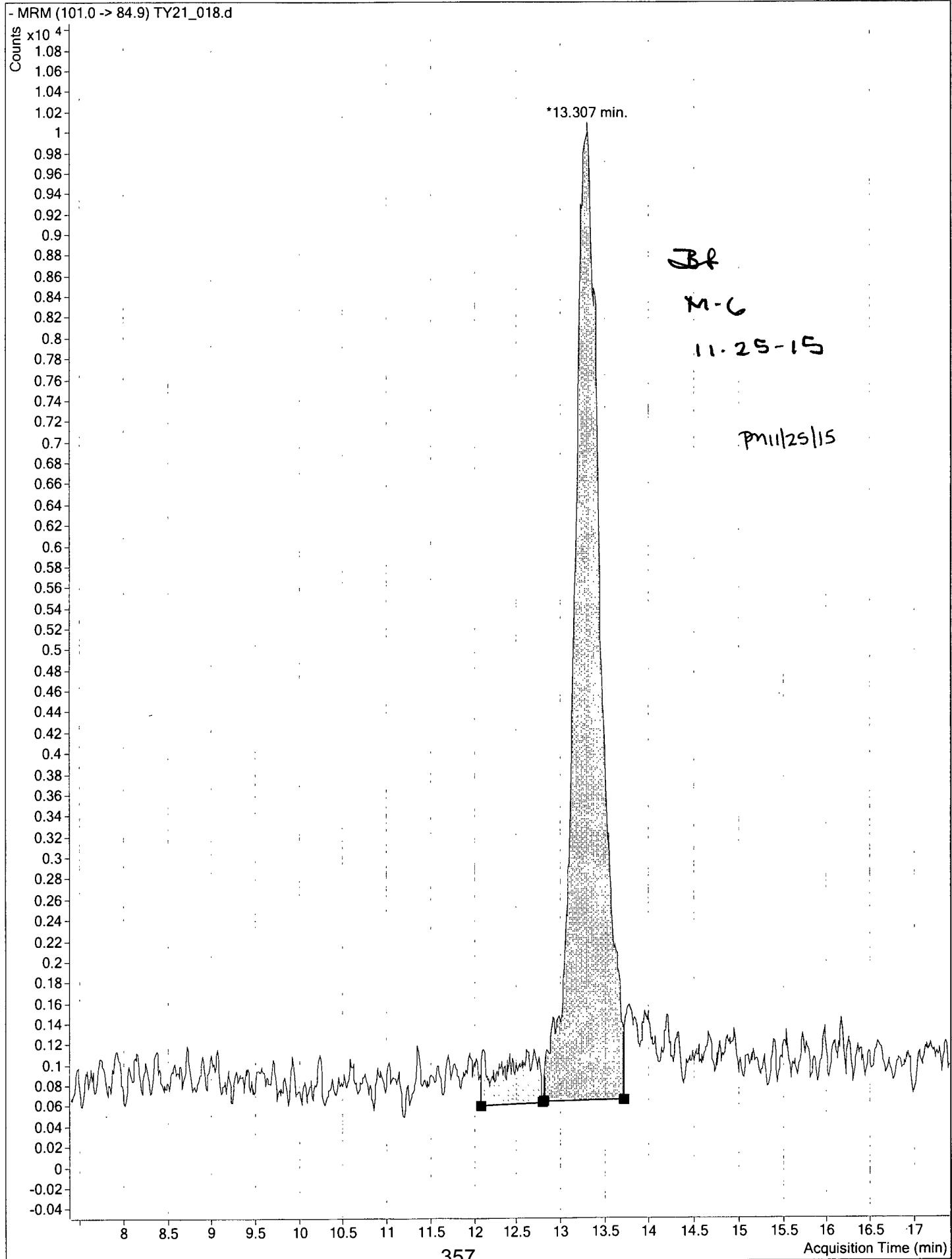
Perchlorate_100



Perchlorate_102







Data File ID: TY21_019.d

Date Injected : 11/21/15

Time Injected : 19:03

Sample ID : AZ24401_S03_MSD-1 4576.7 DF 11/19/15

Client ID : S67-SS53-0006_MSD-1

Retention Time	Area Count	Compound_ID
	Response	Product Ion
13.314	4412732	PER_IS_89
13.300	512307	Perchlorate_83 (512307 * 0.0050) / (1.42 * 4412732.00) * 4576.70 = 1.870620 ppb
13.307	*	169450 Perchlorate_85 (169450 * 0.0050) / (0.46 * 4412732.00) * 4576.70 = 1.912620 ppb

* MANUAL INTEGRATION

Quantitative Analysis Sample Report

Batch Data Path

D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument

LCMS QQQ

Operator

ba

Data File

TY21_019.d

Sample Name

AZ24401_S03_MSD-1 4576.7 DF 11/19/15

Sample Type

Sample

Acq Date

11/21/15

Acq Method

6460_ESI_PER_N_NEWER_K_COLUMN.m

Acq Time

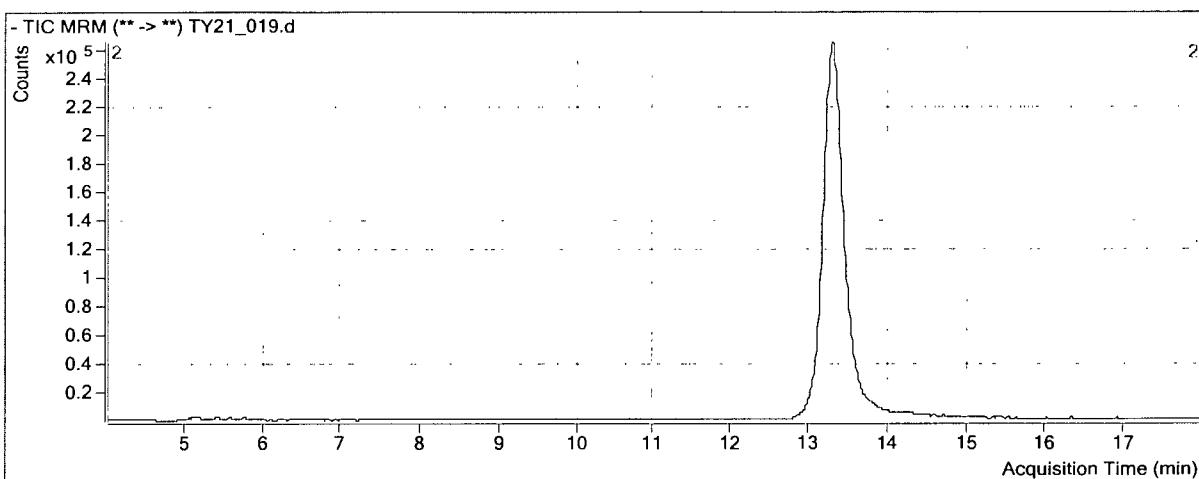
19:03

ClientID

S67-SS53-0006_MSD-1

Inj Vol

20

**Compound****ISTD****RT****Resp****ISTD Resp**

Perchlorate_100

PER_IS_108

13.320 512307

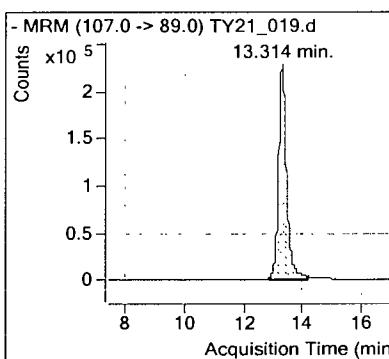
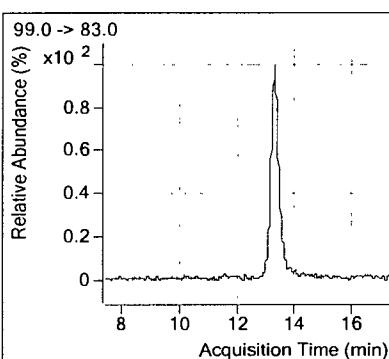
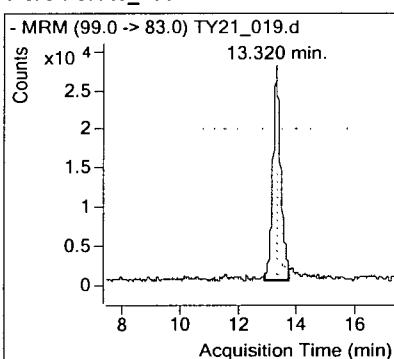
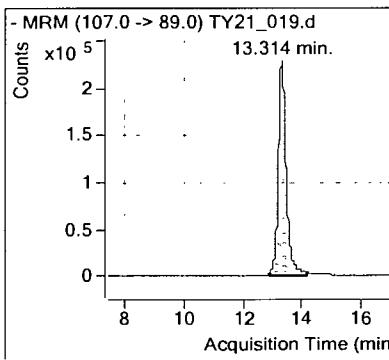
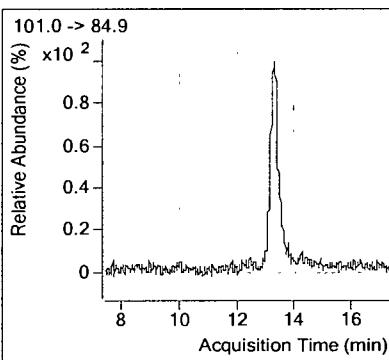
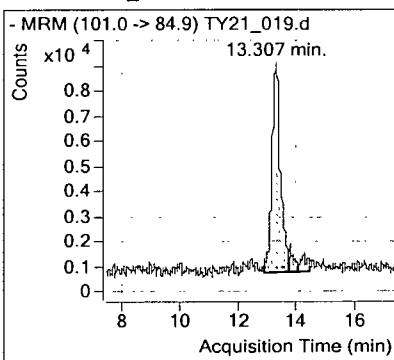
4412732

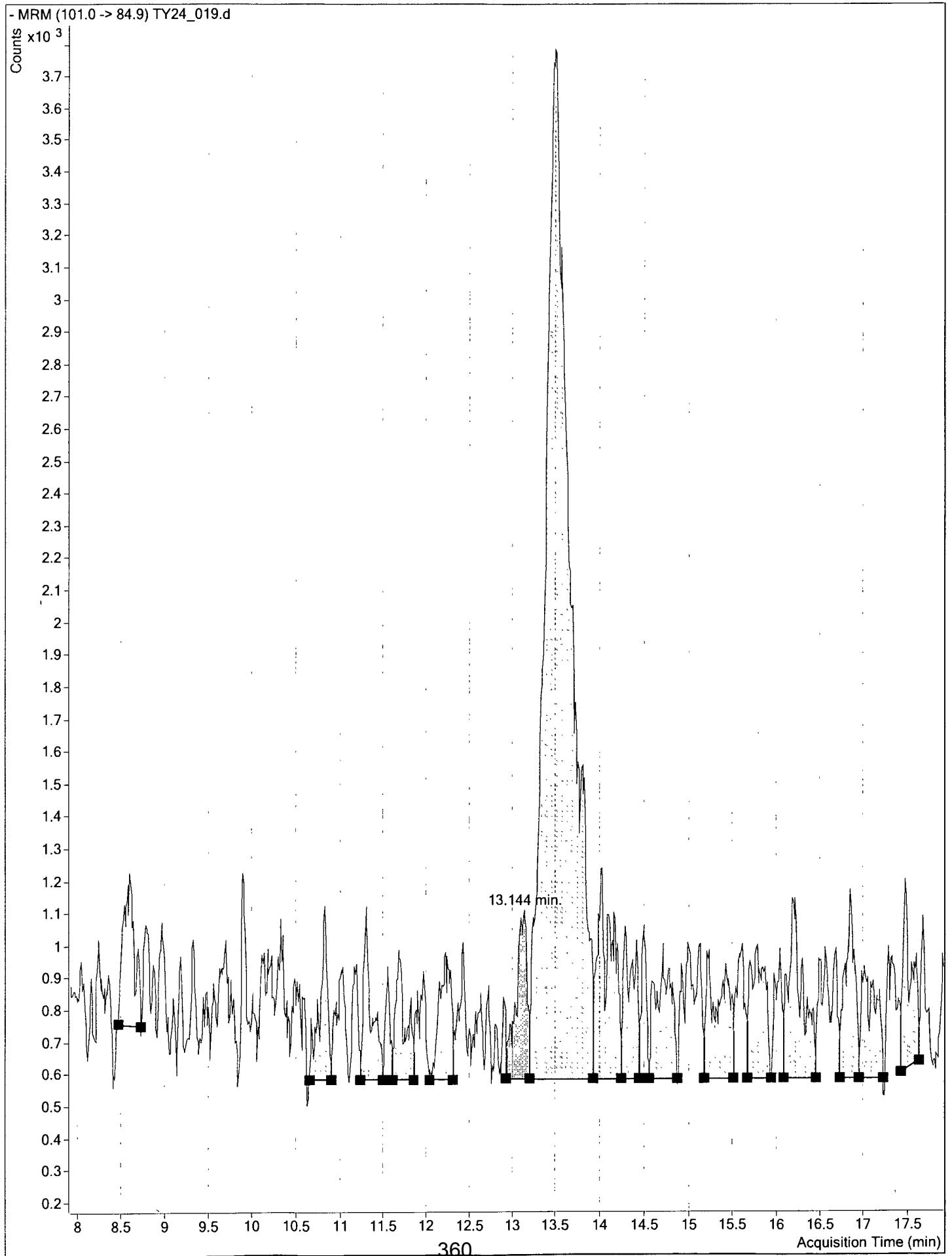
Perchlorate_102

PER_IS_108

* 13.307 169450

4412732 * MANUAL INT

Perchlorate_100**Perchlorate_102**



- MRM (101.0 -> 84.9) TY24_019.d

Counts $\times 10^3$

4
3.9
3.8
3.7
3.6
3.5
3.4
3.3
3.2
3.1
3.0
2.9
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2

*13.500 min.

(GR)

M-6

11-25-15

PM11125115

Interference Check Sample

Perchlorate EPA 6850 Soil

APPL ID: 151119S-24401 ICS - 202876

Batch ID: #6850SM-151119A

APPL Inc.
908 N. Temperance Ave.
Clovis, CA 93711

Compound Name	Spike Level mg/Kg	Spk Result mg/Kg	SPK% Recovery	Recovery Limits
Perchlorate	0.00583	0.00508	87.1%	70-130

Comments:

Quant Method:	QTLMFL2
Extraction Date:	11/19/15
Analysis Date:	11/21/15
Instrument:	AGIL_6560
Run:	TY21_006.D
Initials:	RP

Data File ID: TY21_006.d

Date Injected : 11/21/15

Time Injected : 14:57

Sample ID : 151119S_ICSA 10219.7 DF 11/19/15

Client ID : LAB_CNTL_S_ICSA

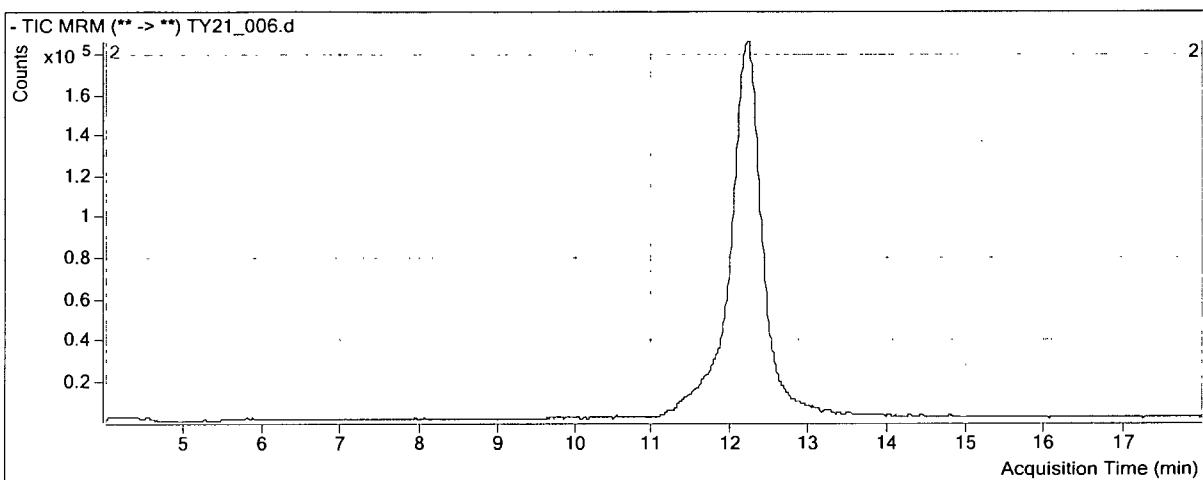
Retention Time	Area Count	Compound ID
	Response	Product Ion
12.234	4580310	PER_IS_89
12.200	646156	Perchlorate_83 $(646156 * 0.0050) / (1.42 * 4580310.00) * 10219.70 = 5.075643 \text{ ppb}$
12.206	*	275608 Perchlorate_85 $(275608 * 0.0050) / (0.46 * 4580310.00) * 10219.70 = 6.692328 \text{ ppb}$

* MANUAL INTEGRATION

Quantitative Analysis Sample Report

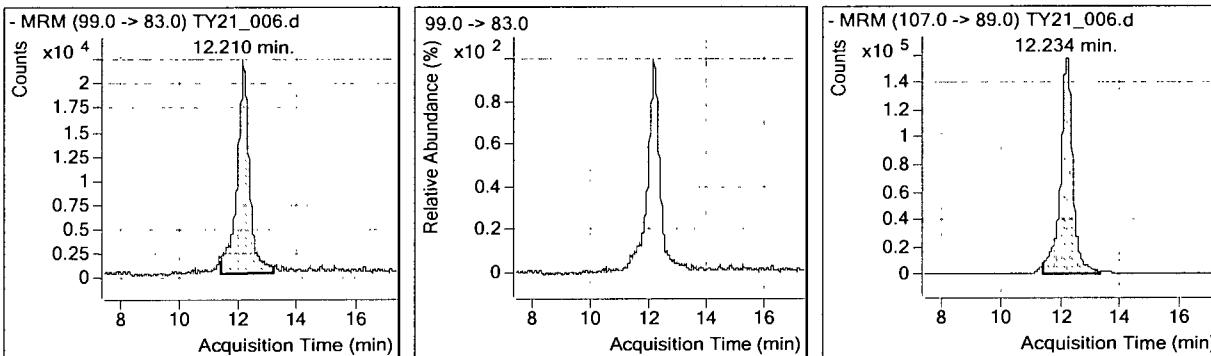
Batch Data Path D:\MassHunter\Data\151121\QuantResults\151121_A_MI.batch.bin

Instrument	LCMS QQQ	Operator	ba
Data File	TY21_006.d	Sample Name	151119S_ICSA 10219.7 DF 11/19/15
Sample Type	Sample	Acq Date	11/21/15
Acq Method	6460_ESI_PER_N_NEWER_K'_COLUMN.m	Acq Time	14:57
ClientID	LAB_CNTL_S_ICSA	Inj Vol	20

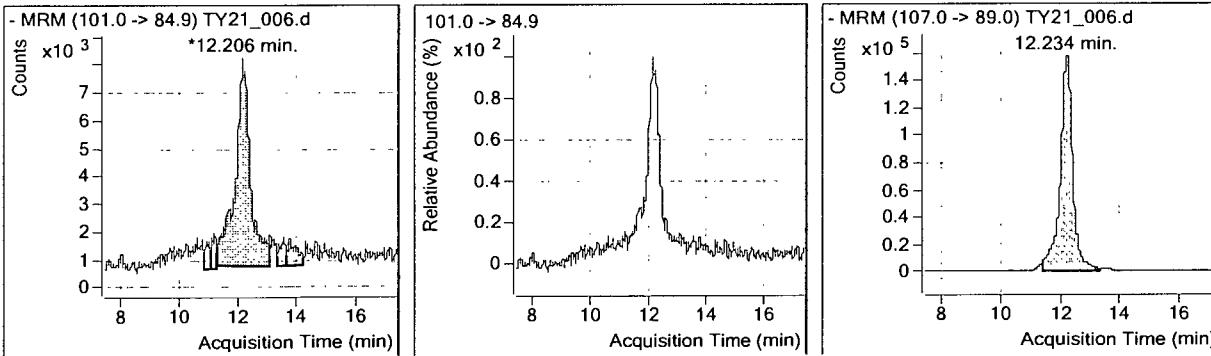


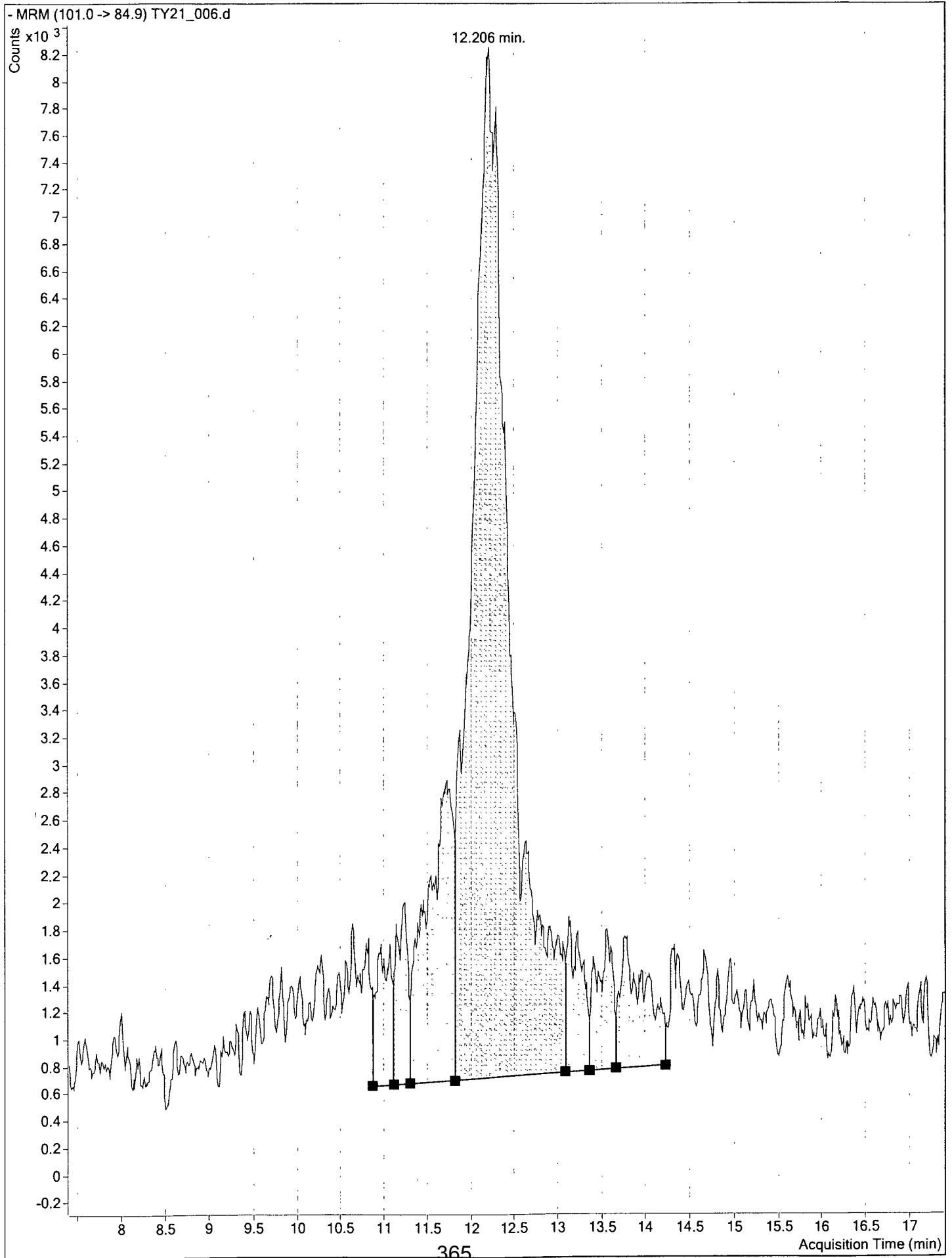
Compound	ISTD	RT	Resp	ISTD Resp
Perchlorate_100	PER_IS_108	12.210	646156	4580310
Perchlorate_102	PER_IS_108	*	12.206	275608 * MANUAL INT

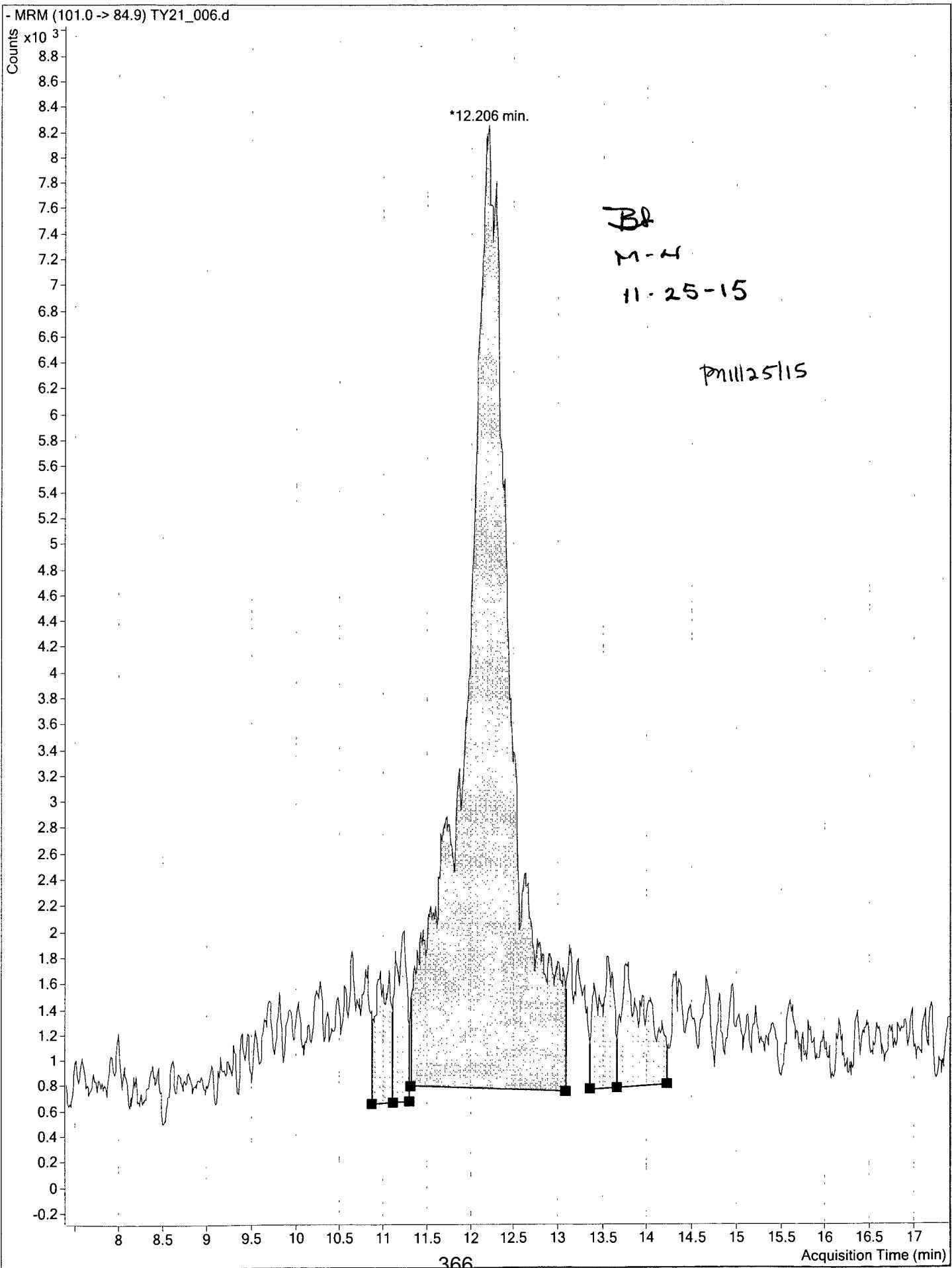
Perchlorate_100



Perchlorate_102







STANDARD	INITIAL CONC	SOURCE DATE	FINAL AMOUNT	FINAL VOLUME	ACQ. FREQ.	LOT #	INITIALS
----------	--------------	-------------	--------------	--------------	------------	-------	----------

**NOTE: THE FOLLOWING DOCUMENTATION
WAS PERFORMED AS DATED: ~~08-06-15~~ 08-06-15**

ACN_H2O_50:50 1 DF 08/01/15:

Burdick & Jackson Acetonitrile Lot DM931 took 10.000 ml and added to 10.000 ml Laboratory Source DI_H2O

36

08-01-15

Note : Above solution was prepared as needed.

PLR_IS_50:50 0.005 ug/ml 08/01/15:

Took 19.000 ml ACN_H2O_50:50 and added 1.000 ml O2SI 18_O_4 Perchlorate 100 ug/L lot 1074176-35164

Note: Solution prepared as needed.

PERCHLORATE 1.0 ug/ml 08/01/15:

PERCHLORATE 10 ug/ml O2SI LOT 1074374-35165 took 0.100 ml and added to 0.900 ml Laboratory Source DI_H2O.

PERCHLORATE 0.010 ug/ml 08/01/15

PERCHLORATE 1.0 ug/ml 08/01/15 took 0.100 ml and added to 9.400 ml ACN_H2O 50:50 1 DF 08/01/15 that had received 0.500 ml O2SI 18_O_4 Perchlorate 100 ug/L lot 1074176-35164.

PERCHLORATE 0.005 ug/ml 08/01/15:

PERCHLORATE 0.010 ug/ml 08/01/14 took 0.500'ml and added to 0.500 ml PER_IS_50:50 0.005 ug/ml 08/01/15.

LAMS STANDARD PREP LOG 105 PAGES 119

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STANDARD	INITIAL CONC	SOURCE DATE	FINAL ALIQUOT VOLUME	FINAL CONC	VOL TN. LOT #	DATE INITIAL
NOTE: THE FOLLOWING DOCUMENTATION WAS PERFORMED AS DATED: JR 08-06-15 08-06-15						
	PERCHLORATE 0.002 ug/ml	08/01/15:				31
	PERCHLORATE 0.010 ug/ml	08/01/15 took 0.200 ml and added to 0.800 ml PER_IS_50:50 0.005 ug/ml	08/01/15.			08-01-15
	PERCHLORATE 0.001 ug/ml	08/01/15:				
	PERCHLORATE 0.010 ug/ml	08/01/15 took 0.100 ml and added to 0.900 ml PER_IS_50:50 0.005 ug/ml	08/01/15.			
	PERCHLORATE 0.0004 ug/ml	08/01/15:				
	PERCHLORATE 0.010 ug/ml	08/01/15 took 0.040 ml and added to 0.960 ml PER_IS_50:50 0.005 ug/ml	08/01/15.			
	PERCHLORATE 0.0002 ug/ml	08/01/15:				
	PERCHLORATE 0.010 ug/ml	08/01/15 took 0.020 ml and added to 0.980 ml PER_IS_50:50 0.005 ug/ml	08/01/15.			
	PERCHLORATE 0.0001 ug/ml	08/01/15:				
	PERCHLORATE 0.010 ug/ml	08/01/15 took 0.010 ml and added to 0.990 ml PER_IS_50:50 0.005 ug/ml	08/01/15.			
	PER_SS 1.0 ug/ml	08/01/15				
	PERCHLORATE_SS O2SI	10 ug/ml lot 1074375-35166 took 0.100 ml and added to 0.900 ml Laboratory Source Di_H2O.				

LC/MS STANDARD PREP LOG 105 Pages 120

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STANDARD	INITIAL CONC	SOURCE DATE	FINAL ALIQUOT	FINAL VOLUME	AGL TEN.	WATER ^F LOT#	INITIALS
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NOTE: THE FOLLOWING DOCUMENTATION
WAS PERFORMED AS DATED: 08-06-15 08-06-15

PER_CCV_1 0.0004 ug/ml 08/01/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.040 ml and added to 0.960 ml PER_IS_50:50 0.005 ug/ml 08/01/15.

PER_CCV_1 0.002 ug/ml 08/01/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.200 ml and added to 0.800 ml PER_IS_50:50 0.005 ug/ml 08/01/15.

PER_CCV_2 0.0004 ug/ml 08/01/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.040 ml and added to 0.960 ml PER_IS_50:50 0.005 ug/ml 08/01/15.

PER_CCV_2 0.002 ug/ml 08/01/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.200 ml and added to 0.800 ml PER_IS_50:50 0.005 ug/ml 08/01/15.

PER_CCV_3 0.0004 ug/ml 08/01/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.040 ml and added to 0.960 ml PER_IS_50:50 0.005 ug/ml 08/01/15.

PER_CCV_3 0.002 ug/ml 08/01/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.200 ml and added to 0.800 ml PER_IS_50:50 0.005 ug/ml 08/01/15.

JB

08-01-15

001

NOTE: THE FOLLOWING DOCUMENTATION
WAS PERFORMED AS DATED: 08-06-15 08-06-15 JL

PER_SS 0.010 ug/ml 08/01/15:

PER_SS 1.0 ug/ml 08/01/15 took 0.100 ml and added to 9.400 ml
ACN_H2O 50:50 1 DF 08/01/15 that had received 0.500 ml
O2SI 18_O_4 Perchlorate 100 ug/L lot 1074176-35164.

PER_SS 0.0004 ug/ml 08/01/15:

PER_SS 0.010 ug/ml 08/01/15 took 0.040 ml and added to
0.960 ml PER_IS_50:50 0.005 ug/ml 08/01/15.

PER_SS 0.002 ug/ml 08/01/15:

PER_SS 0.010 ug/ml 08/01/15 took 0.200 ml and added to
0.800 ml PER_IS_50:50 0.005 ug/ml 08/01/15.

PER_SS 0.0004 ug/ml 09/09/15:

PER_SS 0.010 ug/ml 08/01/15 took 0.040 ml and added to 0.960 ml PER_IS_50:50 0.005 ug/ml 08/01/15.

PER_SS 0.002 ug/ml 09/09/15:

PER_SS 0.010 ug/ml 08/01/15 took 0.200 ml and added to 0.800 ml PER_IS_50:50 0.005 ug/ml 08/01/15.

PER_SS 0.0004 ug/ml 11/06/15:

PER_SS 0.010 ug/ml 08/01/15 took 0.040 ml and added to 0.960 ml PER_IS_50:50 0.005 ug/ml 08/01/15.

NOTE: Performed the above process two times and combined the aliquotes into one injection vial.

PER_SS 0.002 ug/ml 11/06/15:

PER_SS 0.010 ug/ml 08/01/15 took 0.200 ml and added to 0.800 ml PER_IS_50:50 0.005 ug/ml 08/01/15.

NOTE: Performed the above process two times and combined the aliquotes into one injection vial.

ACN_H2O_50:50 1 DF 11/07/15:

Laboratory Source DI_H2O took 10.000 ml and combined with 10.000 ml Burdick & Jackson Acetonitrile Lot DM931

NOTE : Solution prepared as needed.

PER_IS_50:50 0.005 ug/ml 11/07/15:

ACN_H2O_50:50 1 DF 11/07/15 from a volume of 20.000 ml removed 1.000 ml and then delivered 1.000 ML O2SI 18_O4 PERCHLORATE 100 ug/L Lot 1074176-35164

NOTE : Solution prepared as needed.

PERCHLORATE 0.005 ug/ml 11/07/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.500 ml and added to 0.500 ml PER_IS_50:50 0.005 ug/ml 11/07/15

NOTE: Performed the above process two times and combined the aliquotes into one injection vial.

PERCHLORATE 0.002 ug/ml 11/07/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.200 ml and added to 0.800 ml PER_IS_50:50 0.005 ug/ml 11/07/15

NOTE: Performed the above process two times and combined the aliquotes into one injection vial.

PERCHLORATE 0.001 ug/ml 11/07/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.100 ml and added to 0.900 ml PER_IS_50:50 0.005 ug/ml 11/07/15

NOTE: Performed the above process two times and combined the aliquotes into one injection vial.

PERCHLORATE 0.0004 ug/ml 11/07/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.040 ml and added to 0.960 ml PER_IS_50:50 0.005 ug/ml 11/07/15

NOTE: Performed the above process two times and combined the aliquotes into one injection vial.

PERCHLORATE 0.0002 ug/ml 11/07/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.020 ml and added to 0.980 ml PER_IS_50:50 0.005 ug/ml 11/07/15

NOTE: Performed the above process two times and combined the aliquotes into one injection vial.

PERCHLORATE 0.0001 ug/ml 11/07/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.010 ml and added to 0.990 ml PER_IS_50:50 0.005 ug/ml 11/07/15

NOTE: Performed the above process two times and combined the aliquotes into one injection vial.

PER_CCV_1 0.0004 ug/ml 11/07/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.040 ml and added to
0.960 ml PER_IS_50:50 0.005 ug/ml 11/07/15

NOTE: Performed the above process two times and combined
the aliquotes into one injection vial.

PER_CCV_1 0.002 ug/ml 11/07/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.200 ml and added to
0.800 ml PER_IS_50:50 0.005 ug/ml 11/07/15

NOTE: Performed the above process two times and combined
the aliquotes into one injection vial.

PER_CCV_2 0.0004 ug/ml 11/07/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.040 ml and added to
0.960 ml PER_IS_50:50 0.005 ug/ml 11/07/15

NOTE: Performed the above process two times and combined
the aliquotes into one injection vial.

PER_CCV_2 0.002 ug/ml 11/07/15:

PERCHLORATE 0.010 ug/ml 08/01/15 took 0.200 ml and added to
0.800 ml PER_IS_50:50 0.005 ug/ml 11/07/15

NOTE: Performed the above process two times and combined
the aliquotes into one injection vial.

Organic Extraction Worksheet

Method	EPA 6850 HPLC Perchlorate Extraction	Extraction Set	151119A	Extraction Method	HPLC6850GROS	Units	mL
Spiked ID 1	Perchlorate Spike Mix 0.1ppm 8-28-14 exp 7-31-15		Surrogate ID 1				
Spiked ID 2	Mix Anions 25,000ppm 2-10-15 exp 2-10-16		Surrogate ID 2				
Spiked ID 3			Surrogate ID 3				
Spiked ID 4			Surrogate ID 4				
Spiked ID 5			Surrogate ID 5				
Spiked ID 6			Sufficient Vol for Matrix QC:	YES			
Spiked ID 7			Ext. Start Time:	11/19/15 13:05			
Spiked ID 8			Ext. End Time:	11/19/15 13:51			
GC Requires Extract By:							
pH1							Water Bath Temp Criteria
pH2							
pH3							

Spiked By:

Date

Witnessed By:

Date

Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1 151119A Blk				NA	NA equip	1.07g	10ML	NA	11/19/15 13:05	
2 151119A LCS-1		0.060	1	NA	NA equip	1.01g	10ML	NA	11/19/15 13:05	
3 151119A ICS		0.060/0.120	1/2	NA	NA equip	1.03g	10ML	NA	11/19/15 13:05	
4 AZ24396	AZ24396S02			NA	NA equip	2.03g	10ML	NA	11/19/15 13:05	77838
5 AZ24397	AZ24397S01			NA	NA equip	2.02g	10ML	NA	11/19/15 13:05	77838
6 AZ24398	AZ24398S02			NA	NA equip	2.17g	10ML	NA	11/19/15 13:05	77838
7 AZ24399	AZ24399S02			NA	NA equip	2.18g	10ML	NA	11/19/15 13:05	77838
8 AZ24400	AZ24400S02			NA	NA equip	2.34g	10ML	NA	11/19/15 13:05	77838
9 AZ24401 MS-1	AZ24401S03	0.060	1	NA	NA equip	2.26g	10ML	NA	11/19/15 13:05	77838
10 AZ24401 MSD-1	AZ24401S03	0.060	1	NA	NA equip	2.30g	10ML	NA	11/19/15 13:05	77838
11 AZ24401	AZ24401S03			NA	NA equip	2.22g	10ML	NA	11/19/15 13:05	77838

11/19/15

Solvent and Lot#	
DI WATER	11-19-15
SAND	3223C517

Extraction COC Transfer	
Extraction lab employee Initials	CFM
GC analyst's initials	PM
Date	11/19/15
Time	14:00
Refrigerator	NA

Technician's Initials	
Scanned By	CFM
Sample Preparation	CFM
Extraction	CFM
Concentration	-----
Modified	11/19/15 1:13:14 PM

Reviewed By: PM Date 11/19/15
 Ext_ID 37449547

METHOD 6850 INJECTION LOG: 11/17/15**DETECTOR ID: Agilent 6460 Triple Quad LC/MS**

SAMPLE INJECTION ID:	DATA FILE ID:	INJECTION DATE/TIME
PERCHLORATE 0.0002 ug/ml 11/07/15	TY17_003.d	11/17/15 18:09
PERCHLORATE 0.0004 ug/ml 11/07/15	TY17_004.d	11/17/15 18:27
PERCHLORATE 0.001 ug/ml 11/07/15	TY17_005.d	11/17/15 18:46
PERCHLORATE 0.002 ug/ml 11/07/15	TY17_006.d	11/17/15 19:05
PERCHLORATE 0.005 ug/ml 11/07/15	TY17_007.d	11/17/15 19:23
PERCHLORATE 0.010 ug/ml 08/01/15	TY17_008.d	11/17/15 19:42
PER_SS 0.0004 ug/ml 11/06/15	TY17_010.d	11/17/15 20:19
PER_SS 0.002 ug/ml 11/06/15	TY17_011.d	11/17/15 20:38
PER_CCV_1 0.0004 ug/ml 11/07/15	TY17_013.d	11/17/15 21:15
PER_CCV_1 0.002 ug/ml 11/07/15	TY17_014.d	11/17/15 21:34

METHOD 6850 INJECTION LOG: 11/21/15**DETECTOR ID: Agilent 6460 Triple Quad LC/MS**

SAMPLE INJECTION ID:	DATA FILE ID:	INJECTION DATE/TIME
PER_CCV_2 0.0004 ug/ml 11/07/15	TY21_002.d	11/21/15 13:33
PER_CCV_2 0.002 ug/ml 11/07/15	TY21_003.d	11/21/15 13:51
151119SA_LCS-1 10422.1 DF 11/19/15	TY21_005.d	11/21/15 14:30
151119S_ICSA 10219.7 DF 11/19/15	TY21_006.d	11/21/15 14:57
151119SBLKA 9837.7 DF 11/19/15	TY21_007.d	11/21/15 15:20
AZ24396_S02 5185.4 DF 11/19/15	TY21_008.d	11/21/15 15:38
AZ24397_S01 5211.0 DF 11/19/15	TY21_009.d	11/21/15 15:57
AZ24398_S92 4850.8 DF 11/19/15	TY21_010.d	11/21/15 16:15
PER_CCV_2 0.0004 ug/ml 11/07/15	TY21_012.d	11/21/15 16:53
PER_CCV_2 0.002 ug/ml 11/07/15	TY21_013.d	11/21/15 17:11
AZ24399_S02 4828.6 DF 11/19/15	TY21_015.d	11/21/15 17:49
AZ24400_S02 4498.4 DF 11/19/15	TY21_016.d	11/21/15 18:07
AZ24401_S03 4741.6 DF 11/19/15	TY21_017.d	11/21/15 18:26
AZ24401_S03_MS-1 4657.7 DF 11/19/15	TY21_018.d	11/21/15 18:44
AZ24401_S03_MSD-1 4576.7 DF 11/19/15	TY21_019.d	11/21/15 19:03
PER_CCV_2 0.0004 ug/ml 11/07/15	TY21_021.d	11/21/15 19:40
PER_CCV_2 0.002 ug/ml 11/07/15	TY21_022.d	11/21/15 19:59

**EXPLOSIVES
EPA METHOD 8330**

APPL, INC.

**EPA 8330
EXPLOSIVES**

QC Summary



Method Blank
EPA 8330B SOIL

Blank Name/QCG: **151118S-24401 - 202617**
 Batch ID: #83BJU-151118A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
BLANK	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
BLANK	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
BLANK	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/20/15
BLANK	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
BLANK	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/20/15
BLANK	SURROGATE: 1,2-DINITROBENZ	92.9	70-130			%	11/18/15	11/20/15

Quant Method: W150729.M
Run #: 1117_000142
Instrument: Waldorf
Sequence: 151117
Initials: MP

GC SC-Blank-REG MDLs-DOD
 Printed: 11/27/15 2:07:37 PM

EPA 8330BForm 2 & 8**Surrogate Recovery**

Lab Name: APPL, Inc.
 Case No: 77838
 Matrix: SOIL

SDG No: 77838
 Date Analyzed: 11/20/15
 Instrument: Waldorf

APPL ID.	Client Sample No.	SURROGATE: 1,2-DINITROBENZENE (S)				Limits	Result	Qualifier	Limits
		Limits	Result	Qualifier	Limits				
151118A-LCS	Lab Control Spike	70-130	93.4						
AZ24401-MS	Matrix Spike	70-130	93.4						
AZ24401-MSD	Matrix SpikeD	70-130	91.9						
151118A-BLK	Blank	70-130	92.9						
AZ24396	S67-SS50-0006	70-130	93.2						
AZ24397	S67-SS50-0006P	70-130	93.4						
AZ24398	S67-SB50-1618	70-130	94.3						
AZ24399	S67-SS51-0006	70-130	95.1						
AZ24400	S67-SS52-0006	70-130	93.8						
AZ24401	S67-SS53-0006	70-130	93.8						

Comments: Batch: #83BJU-151118A

Printed: 11/28/15 8:21:17 AM
 Form 2 & 8, Surrogate Recovery Summary

Laboratory Control Spike Recovery
EPA 8330B SOIL

APPL ID: **151118S-24401 LCS - 202617**

Batch ID: #83BJU-151118A

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Level mg/kg	SPK Result mg/kg	SPK % Recovery	Recovery Limits
2,4-DINITROTOLUENE	1.96	1.77	90.3	80-125
2,6-DINITROTOLUENE	1.96	1.80	91.8	80-120
HMX	1.96	1.83	93.4	75-125
NITROGLYCERIN	1.96	1.71	87.2	68-131
RDX	1.96	1.74	88.8	70-135
TETRYL	1.96	1.63	83.2	10-150
SURROGATE: 1,2-DINITROBENZENE (S)	1.96	1.83	93.4	70-130
		/		

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	W150729.M
Extraction Date :	11/18/15
Analysis Date :	11/20/15
Instrument :	Waldorf
Run :	1117_000137
Initials :	MP

Printed: 11/27/15 2:07:30 PM
 APPL Standard LCS

Matrix Spike Recoveries
EPA 8330B SOIL

APPL ID: **151118S-24401 MS - 202617**

Batch ID: #83BJU-151118A

Sample ID: AZ24401

Client ID: S67-SS53-0006

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	SPK Lvl	DUP Lvl	Matrix	SPK	DUP	SPK %	DUP %	Recovery	RPD	RPD
	mg/kg	mg/kg	Result	Result	mg/kg	Recovery	Recovery	Limits	%	Limits
2,4-DINITROTOLUENE	1.98	1.97	ND	1.79	1.76	90.4	89.3	80-125	1.2	20
2,6-DINITROTOLUENE	1.98	1.97	ND	1.81	1.79	91.4	90.9	80-120	0.55	20
HMX	1.98	1.97	ND	1.83	1.78	92.4	90.4	75-125	2.2	20
NITROGLYCERIN	1.98	1.97	ND	1.83	1.77	92.4	89.8	68-131	2.9	20
RDX	1.98	1.97	ND	1.58	1.56	79.8	79.2	70-135	0.75	20
TETRYL	1.98	1.97	ND	1.62	1.60	81.8	81.2	10-150	0.74	20
SURROGATE: 1,2-DINITROBENZEN	1.98	1.97	NA	1.85	1.82	93.4	92.4	70-130		

Comments: _____

Primary	SPK	DUP
Quant Method :	W150729.M	W150729.M
Extraction Date :	11/18/15	11/18/15
Analysis Date :	11/20/15	11/20/15
Instrument :	Waldorf	Waldorf
Run :	1117_000138	1117_000139
Initials :	MP	

Printed: 12/07/15 11:57:13 AM

APPL MSD SCII

EPA 8330B

Form 4

Blank Summary

Lab Name: APPL, Inc.

SDG No: 77838

Case No: 77838

Date Analyzed: 11/20/15

Matrix: SOIL

Instrument: Waldorf

Blank ID: 151118A-BLK

Time Analyzed: 2036

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151118A-LCS	Lab Control Spike	1117_000137	11/20/15 1728
151118A-MS	Matrix Spike	1117_000138	11/20/15 1806
151118A-MSD	Matrix SpikeD	1117_000139	11/20/15 1843
151118A-BLK	Blank	1117_000142	11/20/15 2036
AZ24396	S67-SS50-0006	1117_000144	11/20/15 2151
AZ24397	S67-SS50-0006P	1117_000145	11/20/15 2228
AZ24398	S67-SB50-1618	1117_000146	11/20/15 2306
AZ24399	S67-SS51-0006	1117_000147	11/20/15 2343
AZ24400	S67-SS52-0006	1117_000148	11/21/15 0021
AZ24401	S67-SS53-0006	1117_000150	11/20/15 0126

Comments: Batch: #83BJU-151118A

Printed: 11/27/15 2:07:09 PM
Form 4, Blank Summary

**EPA 8330
EXPLOSIVES**

Sample Data

APPL, INC.

EPA 8330B SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24396
QCG: #83BJU-151118A-202617

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/20/15
EPA 8330B	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/20/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	93.2		70-130		%	11/18/15	11/20/15

Quant Method: W150729.M
Run #: 1117_000144
Instrument: Waldorf
Sequence: 151117
Dilution Factor: 1
Initials: MP

Printed: 11/28/15 8:19:28 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000144.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 20-Nov-2015, 21:51:16
 Operator : MP 4 *11-27-15*
 Sample : AZ21396S01 7.882 DF 11/18/15
 Misc : Soil
 ALS Vial : 4295 Sample Multiplier: 7.88177

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 21 12:09:52 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>							
System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.726	0	912704	N.D.	551.134 #
	Spiked Amount	591.133		Recovery	=	0.00%	93.23%
<hr/>							
Target Compounds							
1)	TM HMX	0.000	0.000	0	0	N.D.	N.D.
2)	TM RDX	0.000	0.000	0	0	N.D.	N.D.
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.	N.D.
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
7)	TM NITROBENZENE	0.000	0.000	0	0	N.D.	N.D.
8)	TM NITROGLYC...	0.000	0.000	0	0	N.D. d <i>11-27-15</i>	N.D.
9)	TM TETTRYL	6.808	0.000	255583	0	NoCal	N.D. d
10)	TM 2,4,6-TRI...	7.184	0.000	24553	0	NoCal	N.D.
11)	TM 2-AMINO-4...	7.429	0.000	4672	0	NoCal	<i>NT</i> N.D. d
12)	TM 4-AMINO-2...	7.686	0.000	84438	0	NoCal	<i>NT</i> N.D. d
13)	TM 2,4-DINIT...	8.992	0.000	15493	0	NoCal	N.D.
14)	TM 2,6-DINIT...	9.330	0.000	2950	0	NoCal	N.D.
15)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16)	TM 4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
17)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
18)	TM PETN	0.000	0.000	0	0	N.D. d <i>N</i>	N.D.
<hr/>							

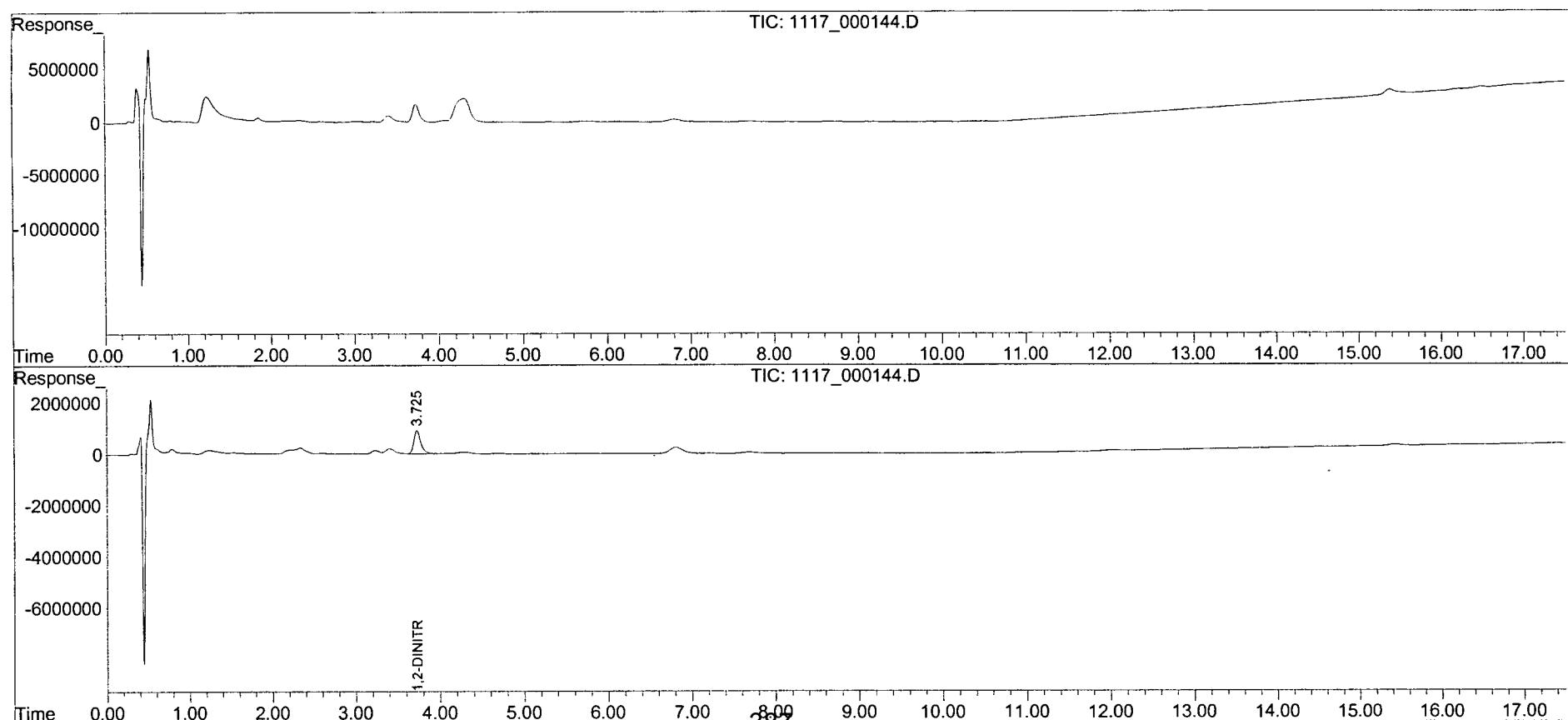
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int. *11-27-15*

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
Data File : 1117_000144.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 20-Nov-2015, 21:51:16
Operator : MP
Sample : AZ22396S01 7.882 DF 11/18/15
Misc : Soil
ALS Vial : 4295 Sample Multiplier: 7.88177

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Nov 21 12:09:52 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



EPA 8330B SOIL

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Norfolk, VA 23502

APPL Inc.
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Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006P
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24397
QCG: #83BJU-151118A-202617

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/20/15
EPA 8330B	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/20/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	93.4		70-130		%	11/18/15	11/20/15

Quant Method: W150729.M
Run #: 1117_000145
Instrument: Waldorf
Sequence: 151117
Dilution Factor: 1
Initials: MP

Printed: 11/27/15 2:07:41 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000145.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 20-Nov-2015, 22:28:47
 Operator : MP *11-27-15*
 Sample : AZ27397S01 7.913 DF 11/18/15
 Misc : Soil
 ALS Vial : 4296 Sample Multiplier: 7.91296

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 21 12:27:47 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
----------	------	------	--------	--------	-----	-----

System Monitoring Compounds
 4) S 1,2-DINIT... 0.000 3.727 0 914712 N.D. 554.532 #
 Spiked Amount 593.472 Recovery = 0.00% 93.44%

Target Compounds

1) TM HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM RDX	0.000	0.000	0	0	N.D.	N.D.
3) TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.	N.D.
5) TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6) TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
7) TM NITROBENZENE	0.000	0.000	0	0	N.D.	N.D.
8) TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D.
9) TM TETRYL	6.814	0.000	232033	0	NoCal	d
10) TM 2,4,6-TRI...	7.172	0.000	17056	0	NoCal	N.D.
11) TM 2-AMINO-4...	7.453	0.000	7934	0	NoCal	N.D.
12) TM 4-AMINO-2...	8.014	0.000	340	0	NoCal	N.D.
13) TM 2,4-DINIT...	8.983	0.000	20122	0	NoCal	N.D.
14) TM 2,6-DINIT...	9.345	0.000	14222	0	NoCal	N.D.
15) TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM 4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
17) TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
18) TM PETN	0.000	0.000	0	0	N.D. d	N.D.

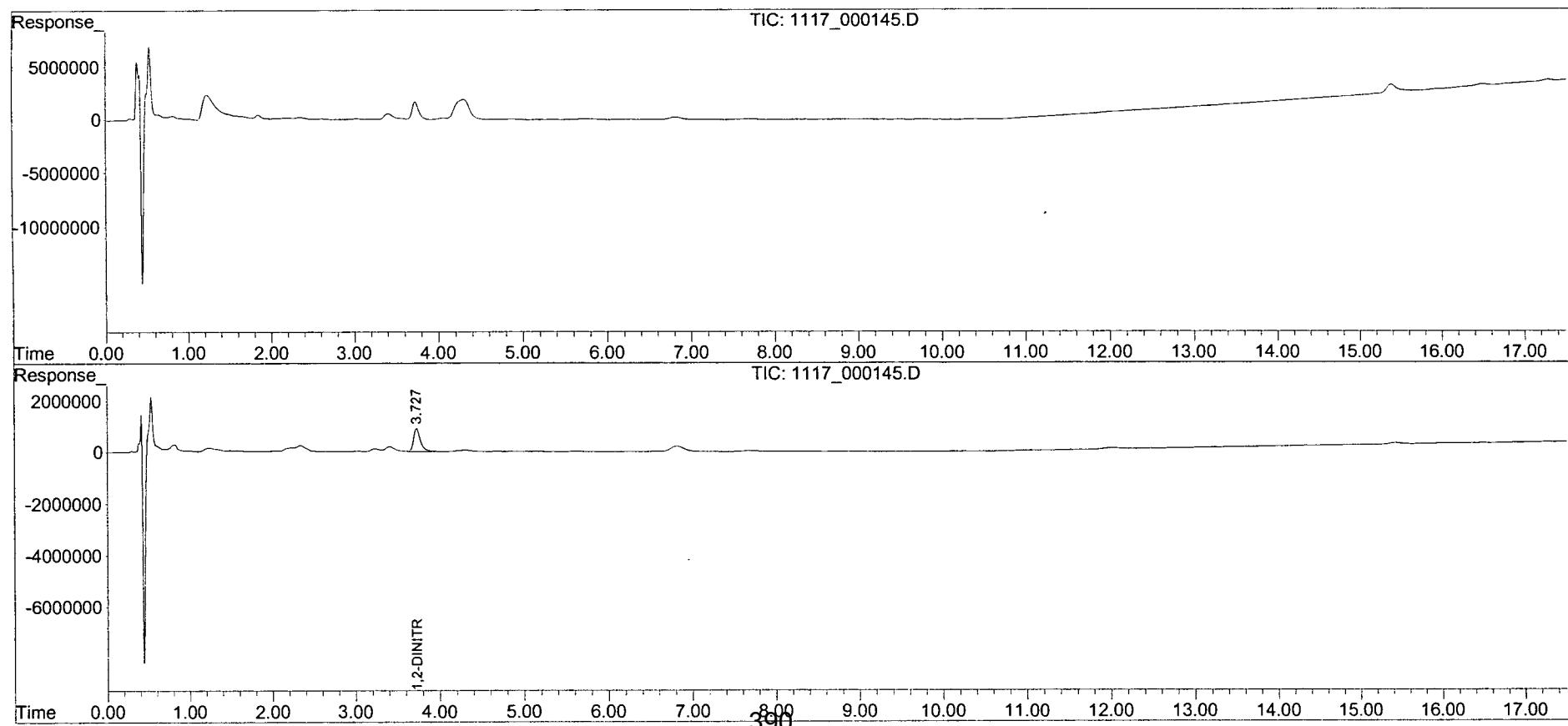
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int. *11-27-15*

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
Data File : 1117_000145.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 20-Nov-2015, 22:28:47
Operator : MP
Sample : AZ22397S01 7.913 DF 11/18/15
Misc : Soil
ALS Vial : 4296 Sample Multiplier: 7.91296

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Nov 21 12:27:47 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



EPA 8330B SOIL

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Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SB50-1618
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24398
QCG: #83BJU-151118A-202617

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/20/15
EPA 8330B	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/20/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	94.3		70-130		%	11/18/15	11/20/15

Quant Method: W150729.M
Run #: 1117_000146
Instrument: Waldorf
Sequence: 151117
Dilution Factor: 1
Initials: MP

Printed: 11/27/15 2:07:41 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000146.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 20-Nov-2015, 23:06:16
 Operator : MP *11-27-15*
 Sample : AZ27398S01 7.859 DF 11/18/15
 Misc : Soil
 ALS Vial : 4352 Sample Multiplier: 7.85855

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 21 12:28:45 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>							
System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.736	0	922936	N.D.	555.671 #
	Spiked Amount	589.391		Recovery	=	0.00%	94.28%
<hr/>							
Target Compounds							
1)	TM HMX	0.000	0.000	0	0	N.D.	N.D.
2)	TM RDX	0.000	0.000	0	0	N.D.	N.D.
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.	N.D.
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
7)	TM NITROBENZENE	0.000	0.000	0	0	N.D.	N.D.
8)	TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D.
9)	TM TETRYL	6.738	0.000	3902	0	NoCal	N.D.
10)	TM 2,4,6-TRI...	7.227	0.000	17020	0	NoCal	N.D.
11)	TM 2-AMINO-4...	7.505	0.000	3337	0	NoCal	N.D.
12)	TM 4-AMINO-2...	7.855	0.000	25484	0	NoCal	N.D.
13)	TM 2,4-DINIT...	9.106	0.000	14541	0	NoCal	N.D.
14)	TM 2,6-DINIT...	9.337	0.000	16554	0	NoCal	N.D.
15)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16)	TM 4-NITROTO...	0.000	0.000	0	0	N.D. NT	N.D. d
17)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
18)	TM PETN	0.000	0.000	0	0	N.D. d	NT N.D.

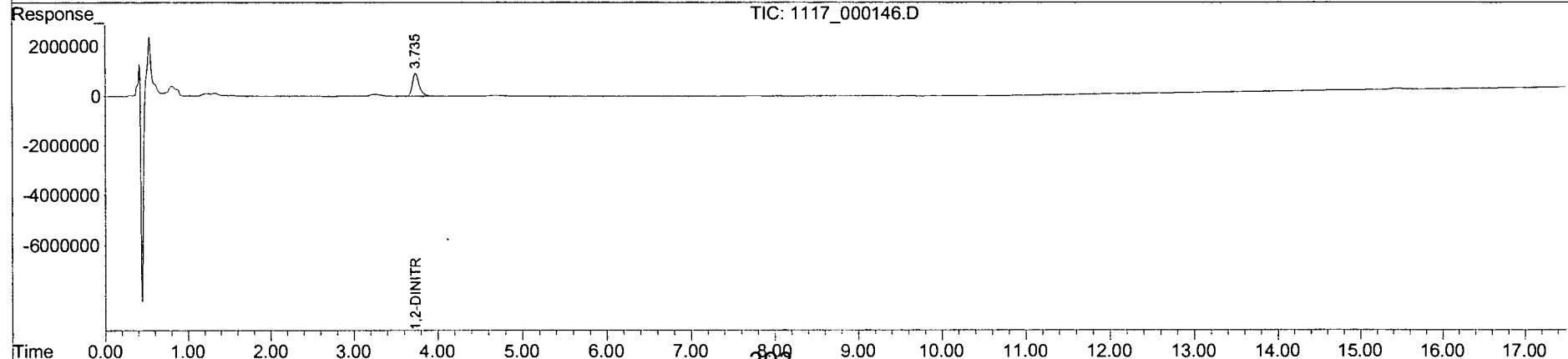
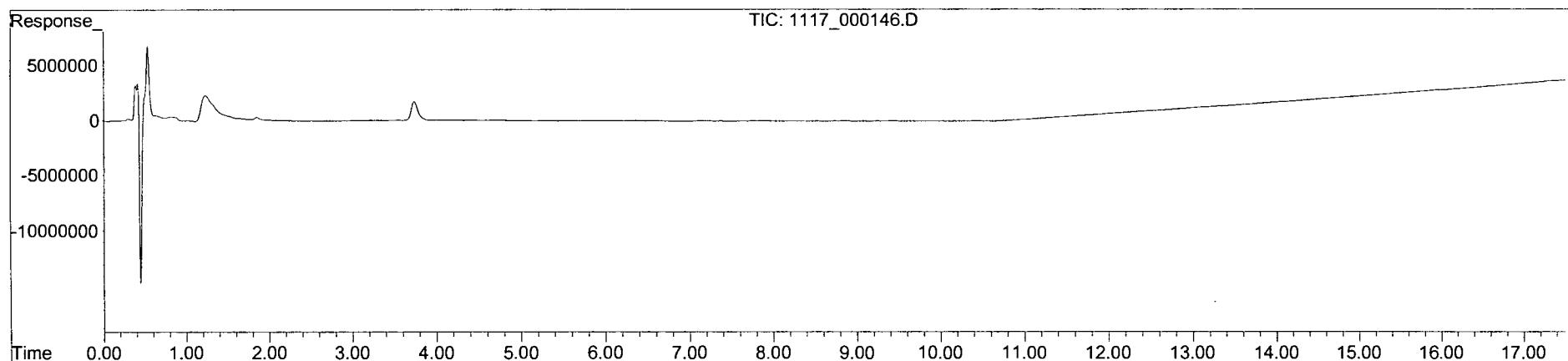
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int. *11-27-15*

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
Data File : 1117_000146.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 20-Nov-2015, 23:06:16
Operator : MP
Sample : AZ22398S01 7.859 DF 11/18/15
Misc : Soil
ALS Vial : 4352 Sample Multiplier: 7.85855

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Nov 21 12:28:45 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



EPA 8330B SOIL

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Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS51-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24399
QCG: #83BJU-151118A-202617

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/20/15
EPA 8330B	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/20/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	95.1		70-130		%	11/18/15	11/20/15

Quant Method: W150729.M
Run #: 1117_000147
Instrument: Waldorf
Sequence: 151117
Dilution Factor: 1
Initials: MP

Printed: 11/27/15 2:07:41 PM
APPL-F1-SC-NoMC-REG MDLS-DOD

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000147.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 20-Nov-2015, 23:43:47
 Operator : MP 4 11-27-15
 Sample : AZ2#399S01 7.921 DF 11/18/15
 Misc : Soil
 ALS Vial : 4353 Sample Multiplier: 7.92079

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 21 12:30:27 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
----------	------	------	--------	--------	-----	-----

System Monitoring Compounds
 4) S 1,2-DINIT... 0.000 3.721 0 930575 N.D. 564.708 #
 Spiked Amount 594.059 Recovery = 0.00% 95.06%

Target Compounds

1) TM HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM RDX	0.000	0.000	0	0	N.D.	N.D.
3) TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.	N.D.
5) TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6) TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
7) TM NITROBENZENE	0.000	0.000	0	0	N.D.	N.D.
8) TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D.
9) TM TETRYL	6.795	0.000	210480	0	NoCal	d
10) TM 2,4,6-TRI...	7.308	0.000	48408	0	NoCal	
11) TM 2-AMINO-4...	7.515	0.000	18725	0	NoCal	NR
12) TM 4-AMINO-2...	8.004	0.000	1957	0	NoCal	NR
13) TM 2,4-DINIT...	8.992	0.000	17864	0	NoCal	
14) TM 2,6-DINIT...	9.374	0.000	16133	0	NoCal	
15) TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM 4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
17) TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
18) TM PETN	0.000	0.000	0	0	N.D. d	N.D.

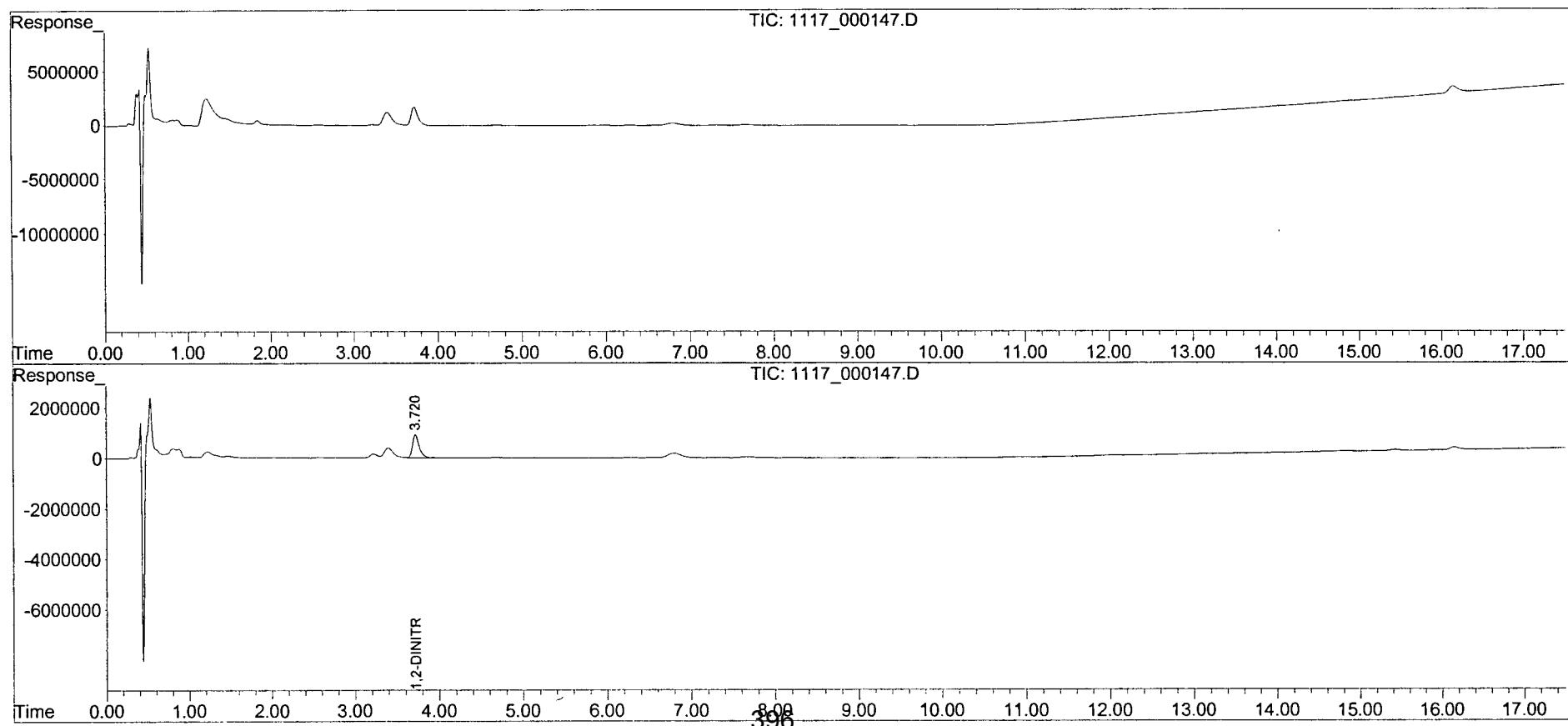
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int. 11-27-15

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
Data File : 1117_000147.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 20-Nov-2015, 23:43:47
Operator : MP
Sample : AZ22399S01 7.921 DF 11/18/15
Misc : Soil
ALS Vial : 4353 Sample Multiplier: 7.92079

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Nov 21 12:30:27 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



EPA 8330B SOIL

Tetra Tech
 5700 Lake Wright Dr, Ste 309
 Norfolk, VA 23502

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Attn: Ed Corack
 Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS52-0006
 Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24400
 QCG: #83BJU-151118A-202617

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/21/15
EPA 8330B	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/21/15
EPA 8330B	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/21/15
EPA 8330B	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/21/15
EPA 8330B	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/21/15
EPA 8330B	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/21/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	93.8		70-130		%	11/18/15	11/21/15

Quant Method: W150729.M
 Run #: 1117_000148
 Instrument: Waldorf
 Sequence: 151117
 Dilution Factor: 1
 Initials: MP

Printed: 11/27/15 2:07:41 PM
 APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000148.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 21-Nov-2015, 00:21:16
 Operator : MP 4 *11-27-15*
 Sample : AZ2400S01 7.874 DF 11/18/15
 Misc : Soil
 ALS Vial : 4354 Sample Multiplier: 7.87402

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 21 12:31:32 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
----------	------	------	--------	--------	-----	-----

System Monitoring Compounds
 4) S 1,2-DINIT... 0.000 3.727 0 917793 N.D. 553.662 #
 Spiked Amount 590.551 Recovery = 0.00% 93.75%

Target Compounds

1) TM HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM RDX	0.000	0.000	0	0	N.D.	N.D.
3) TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.	N.D.
5) TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6) TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
7) TM NITROBENZENE	0.000	0.000	0	0	N.D.	N.D.
8) TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D.
9) TM TETRYL	6.819	0.000	256752	0	NoCal	d
10) TM 2,4,6-TRI...	7.148	0.000	21854	0	NoCal	
11) TM 2-AMINO-4...	7.348	0.000	42465	0	NoCal	NT
12) TM 4-AMINO-2...	7.990	0.000	14488	0	NoCal	MT
13) TM 2,4-DINIT...	8.989	0.000	20490	0	NoCal	
14) TM 2,6-DINIT...	9.327	0.000	11977	0	NoCal	
15) TM 2-NITROTO...	0.000	0.000	0	0	N.D.	
16) TM 4-NITROTO...	0.000	0.000	0	0	N.D.	
17) TM 3-NITROTO...	0.000	0.000	0	0	N.D.	
18) TM PETN	0.000	0.000	0	0	N.D. d	N.D.

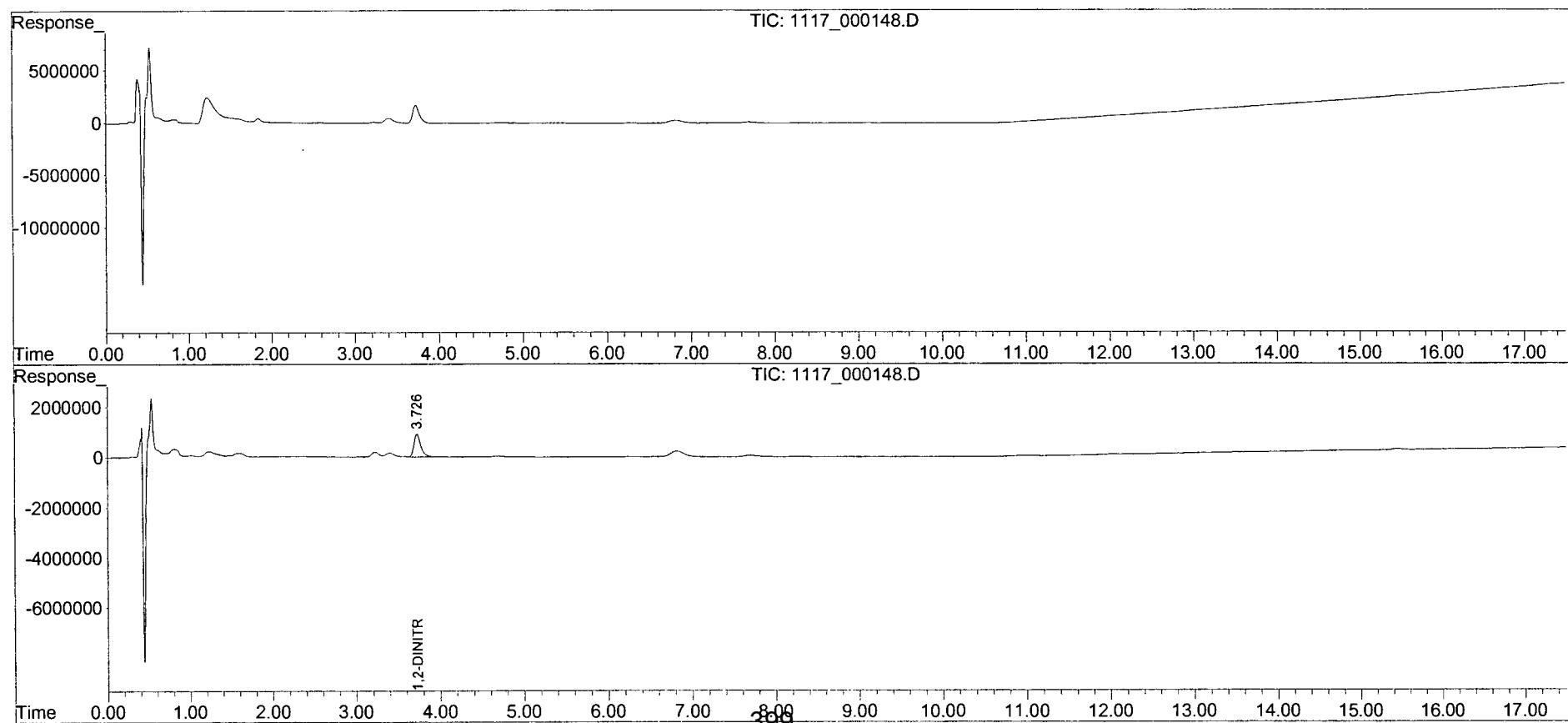
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int. *11-27-15*

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
Data File : 1117_000148.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 21-Nov-2015, 00:21:16
Operator : MP
Sample : AZ22400S01 7.874 DF 11/18/15
Misc : Soil
ALS Vial : 4354 Sample Multiplier: 7.87402

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Nov 21 12:31:32 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



EPA 8330B SOIL

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS53-0006
Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24401
QCG: #83BJU-151118A-202617

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8330B	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
EPA 8330B	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/20/15
EPA 8330B	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
EPA 8330B	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/20/15
EPA 8330B	SURROGATE: 1,2-DINITROBENZENE (	93.8		70-130		%	11/18/15	11/20/15

Quant Method: W150729.M
Run #: 1117_000150
Instrument: Waldorf
Sequence: 151117
Dilution Factor: 1
Initials: MP

Printed: 11/27/15 2:30:17 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000150.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 21-Nov-2015, 01:26:24
 Operator : MP *11-27-15*
 Sample : AZ27401S01 7.897 DF 11/18/15
 Misc : Soil
 ALS Vial : 4355 Sample Multiplier: 7.89733

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 27 14:28:07 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	3.731	0	918220	N.D.	555.560 #
Spiked Amount	592.300		Recovery	=	0.00%	93.80%
<hr/>						
Target Compounds						
1) TM HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM RDX	0.000	0.000	0	0	N.D.	N.D.
3) TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.	N.D.
5) TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6) TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
7) TM NITROBENZENE	0.000	0.000	0	0	N.D.	N.D.
8) TM NITROGLYC...	0.000	0.000	0	0	N.D. d CDL	N.D.
9) TM TETRYL	6.825	0.000	354016	0	NoCal ALT	N.D. d
10) TM 2,4,6-TRI...	7.188	0.000	7457	0	NoCal	N.D.
11) TM 2-AMINO-4...	7.632	0.000	130416	0	NoCal	NT N.D. d
12) TM 4-AMINO-2...	8.004	0.000	8799	0	NoCal	NT N.D. d
13) TM 2,4-DINIT...	8.984	0.000	11409	0	NoCal	N.D.
14) TM 2,6-DINIT...	9.371	0.000	11398	0	NoCal	N.D.
15) TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM 4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
17) TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
18) TM PETN	0.000	0.000	0	0	N.D.	N.D.
<hr/>						

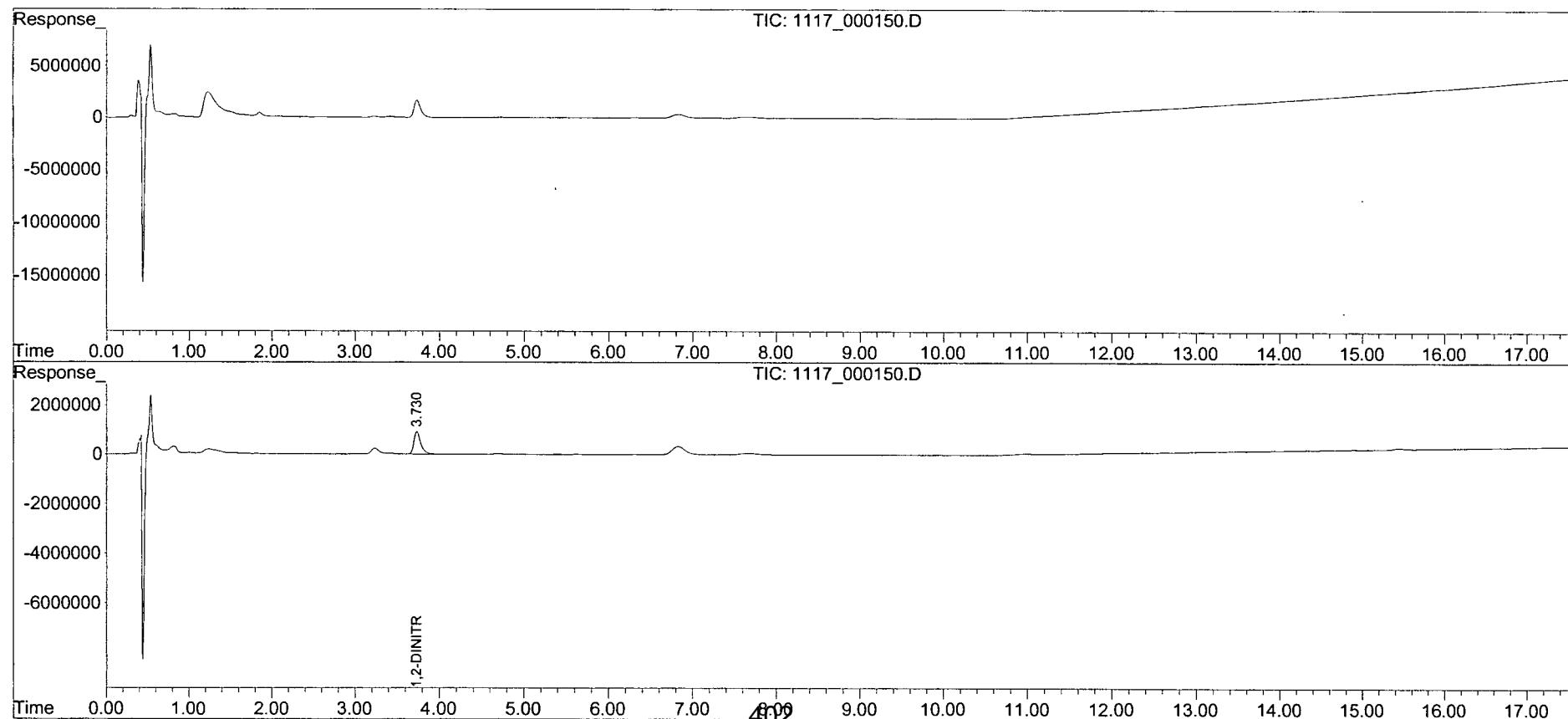
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int. *11-27-15*

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
Data File : 1117_000150.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 21-Nov-2015, 01:26:24
Operator : MP
Sample : AZ22401S01 7.897 DF 11/18/15
Misc : Soil
ALS Vial : 4355 Sample Multiplier: 7.89733

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Nov 27 14:28:07 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



EPA 8330
EXPLOSIVES

Calibration Data

APPL, INC.

Initial Calibration

Lab Name: APPL, Inc.

Case No:

Matrix:

SDG No:

Initial Cal. Date: 07/29/15

Instrument: Waldorf

0729_0000019.D 0729_0000020.D 0729_0000021.D 0729_0000022.D 0729_0000023.D 0729_0000024.D 0728_0000025.D 0728_0000026.D 0728_0000027.D

Initials: MP

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000019.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 19:31:02
 Operator : MP
 Sample : 8330_CB 0.005 PPM 07/29/15
 Misc :
 ALS Vial : 8384 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:59:38 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 11:47:55 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>							
4)	S 1,2-DINIT...	0.000	3.746	0	64675	N.D.	4.523 #
Spiked Amount 62.500							
<hr/>							
System Monitoring Compounds							
1)	TM HMX	0.000	0.948	0	134696	N.D.	4.829 #
2)	TM RDX	0.000	1.805	0	84810	N.D.	4.671 #
3)	TM 1,3,5-TRI...	0.000	2.947	0	151273	N.D.	4.604 #
5)	TM 1,3-DINIT...	0.000	3.906	0	136867	N.D.	4.499 #
6)	TM 3,5-DINIT...	0.000	4.162	0	119139	N.D.	4.536 #
7)	TM NITROBENZENE	0.000	5.309	0	62149	N.D.	4.469 #
8)	TM NITROGLYC...	6.310	0.000	25488	0	4.232m	N.D. #
9)	TM TETRYL	6.771	6.775	97138	51292	NoCal	4.618 #
10)	TM 2,4,6-TRI...	7.240	7.241	82153	62242	NoCal	4.435 #
11)	TM 2-AMINO-4...	7.568	7.572	92253	58935	NoCal	4.378 #
12)	TM 4-AMINO-2...	7.929	7.927	85670	44335	NoCal	4.443 #
13)	TM 2,4-DINIT...	9.077	9.073	50854	58637	NoCal	4.496 #
14)	TM 2,6-DINIT...	9.450	9.440	57596	32337	NoCal	4.386 #
15)	TM 2-NITROTO...	0.000	12.820	0	24570	N.D.	4.620 #
16)	TM 4-NITROTO...	0.000	13.436	0	21278	N.D.	4.072 #
17)	TM 3-NITROTO...	0.000	14.291	0	25542	N.D.	4.112 #
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.
<hr/>							

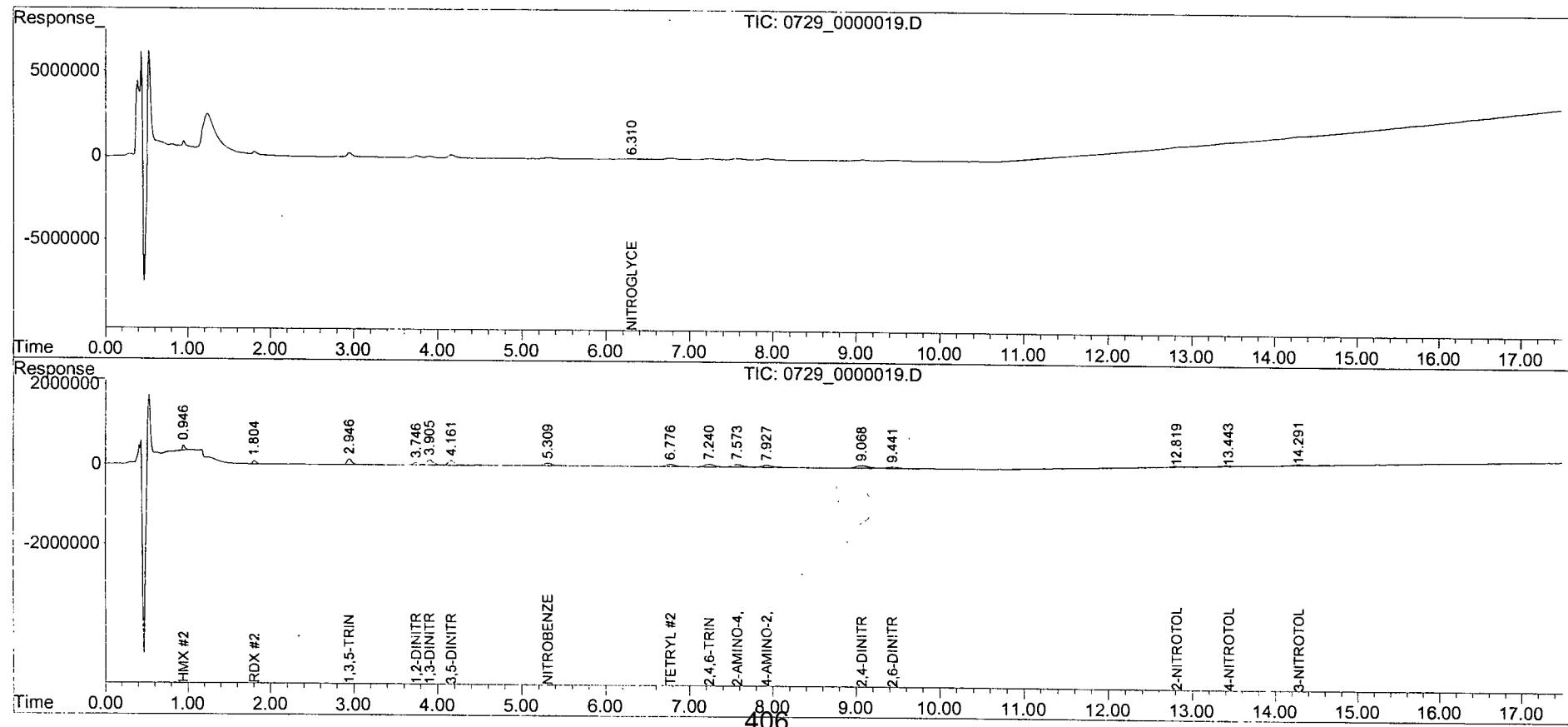
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000019.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 19:31:02
Operator : MP
Sample : 8330_CB 0.005 PPM 07/29/15
Misc :
ALS Vial : 8384 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:59:38 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 11:47:55 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

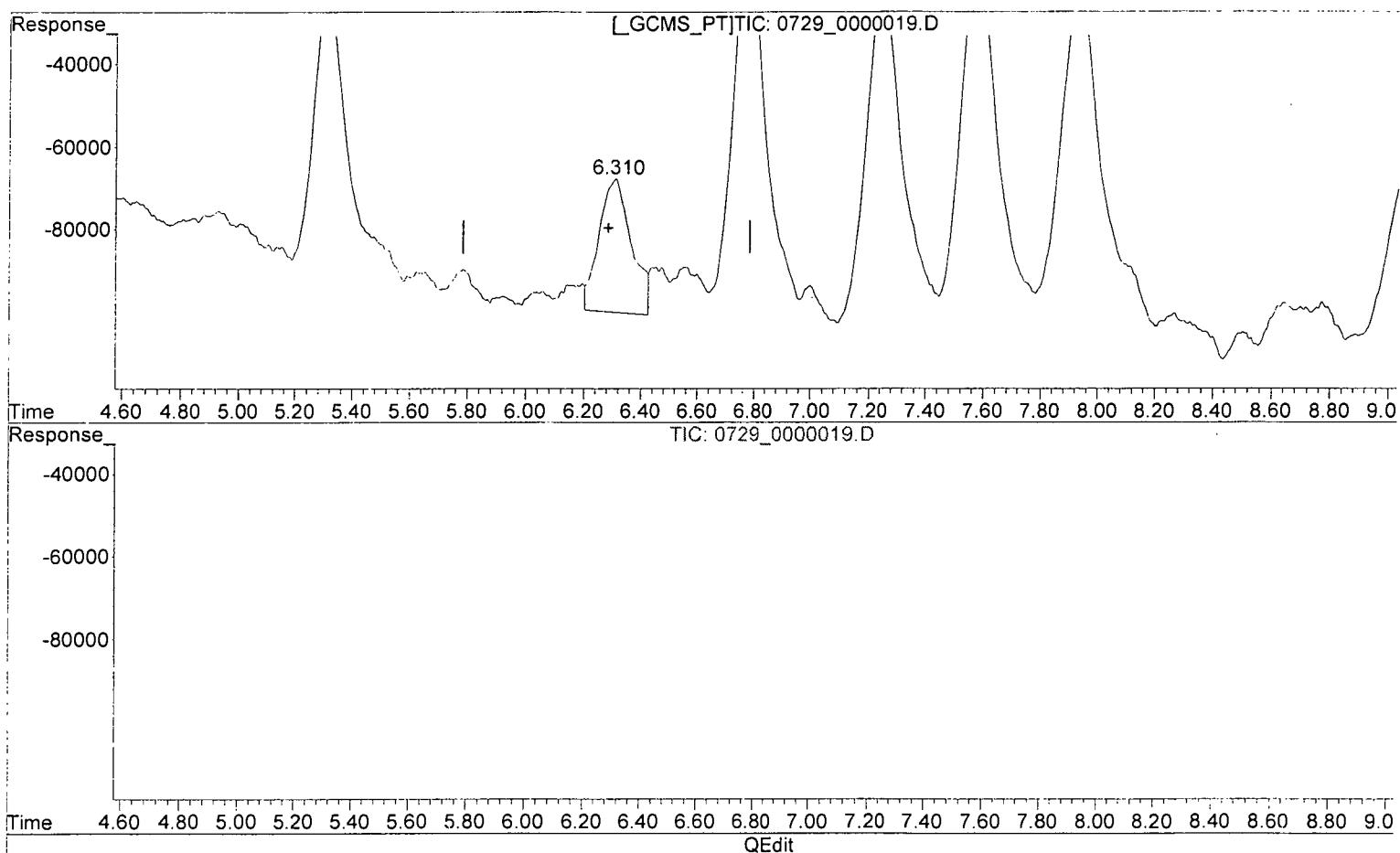


Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000019.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 19:31:02
Operator : MP
Sample : 8330_CB 0.005 PPM 07/29/15
Misc :
ALS Vial : 8384 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:48:10 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 11:47:55 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0:



(8) NITROGLYCERIN (TM)

6.310min 5.394 ppb

response 32482

(8) NITROGLYCERIN #2 (TM)

0.000min 0.000 ppb

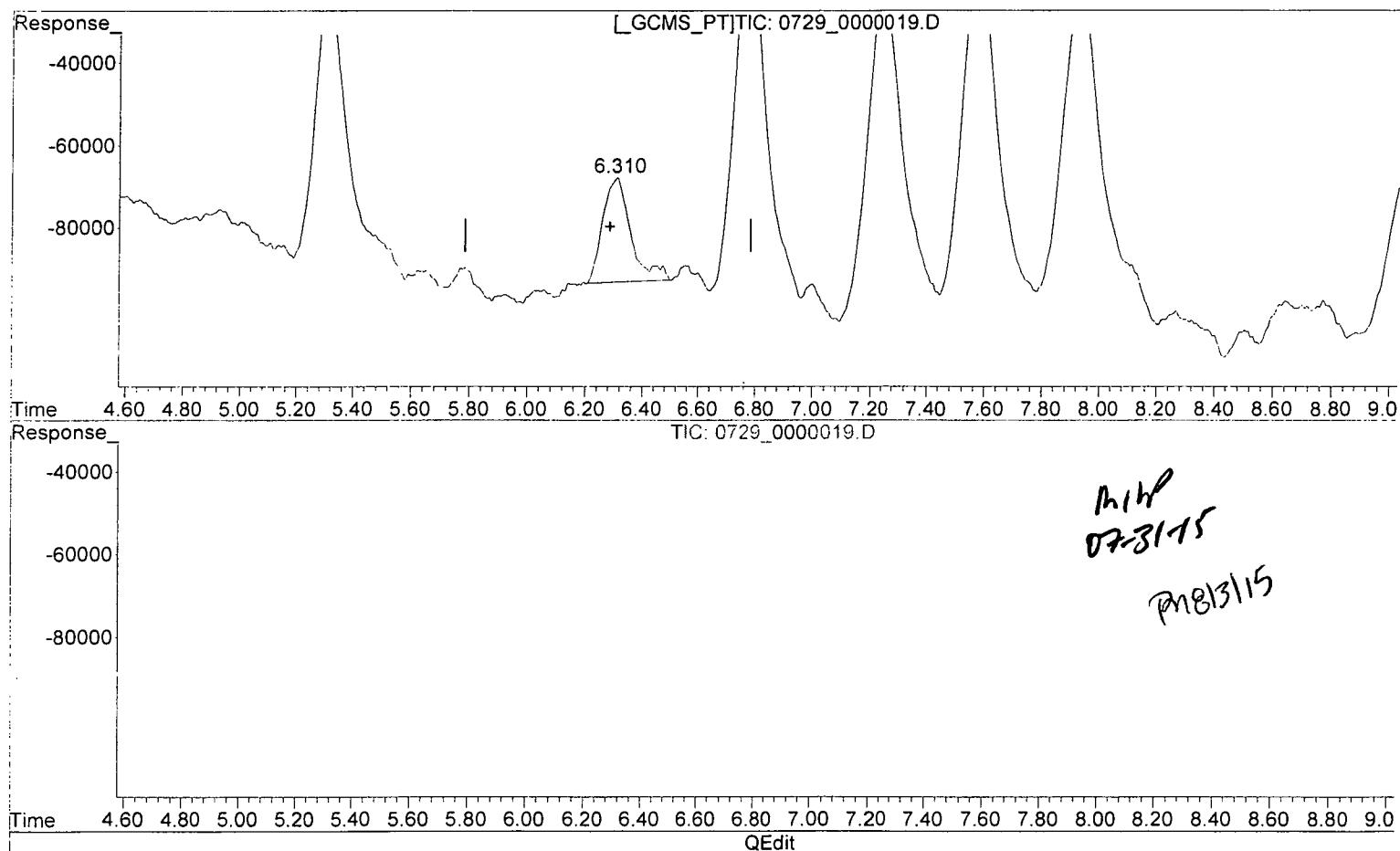
response 0

Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000019.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 19:31:02
 Operator : MP
 Sample : 8330_CB 0.005 PPM 07/29/15
 Misc :
 ALS Vial : 8384 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:48:10 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 11:47:55 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100×3.0m



(8) NITROGLYCERIN (TM)

6.310min 4.232 ppb m

response 25488

(8) NITROGLYCERIN #2 (TM)

0.000min 0.000 ppb

response 0

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000020.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 19:58:32
 Operator : MP
 Sample : 8330_CB 0.010 PPM 07/29/15
 Misc :
 ALS Vial : 8385 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:58:41 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>							
System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.750	0	130688	N.D.	9.139 #
Spiked Amount 62.500							
				Recovery	=	0.00%	14.62%
<hr/>							
Target Compounds							
1)	TM HMX	0.000	0.948	0	271275	N.D.	9.726 #
2)	TM RDX	0.000	1.806	0	168592	N.D.	9.285 #
3)	TM 1,3,5-TRI...	0.000	2.947	0	299950	N.D.	9.128 #
5)	TM 1,3-DINIT...	0.000	3.908	0	279032	N.D.	9.173 #
6)	TM 3,5-DINIT...	0.000	4.167	0	236666	N.D.	9.011 #
7)	TM NITROBENZENE	0.000	5.310	0	123539	N.D.	8.883 #
8)	TM NITROGLYC...	6.304	0.000	60636	0	10.069	N.D. #
9)	TM TETRYL	6.777	6.777	176385	104395	NoCal	9.399 #
10)	TM 2,4,6-TRI...	7.240	7.240	164541	124544	NoCal	8.874 #
11)	TM 2-AMINO-4...	7.578	7.579	182179	118665	NoCal	8.814 #
12)	TM 4-AMINO-2...	7.934	7.933	161264	89452	NoCal	8.965 #
13)	TM 2,4-DINIT...	9.072	9.075	99894	112274	NoCal	8.608 #
14)	TM 2,6-DINIT...	9.442	9.446	98059	62906	NoCal	8.532 #
15)	TM 2-NITROTO...	0.000	12.826	0	47109	N.D.	8.859 #
16)	TM 4-NITROTO...	0.000	13.424	0	46493	N.D.	8.898 #
17)	TM 3-NITROTO...	0.000	14.287	0	57549	N.D.	9.265m#
18)	TM PETN	0.000	0.000	0	0	N.D.	
<hr/>							

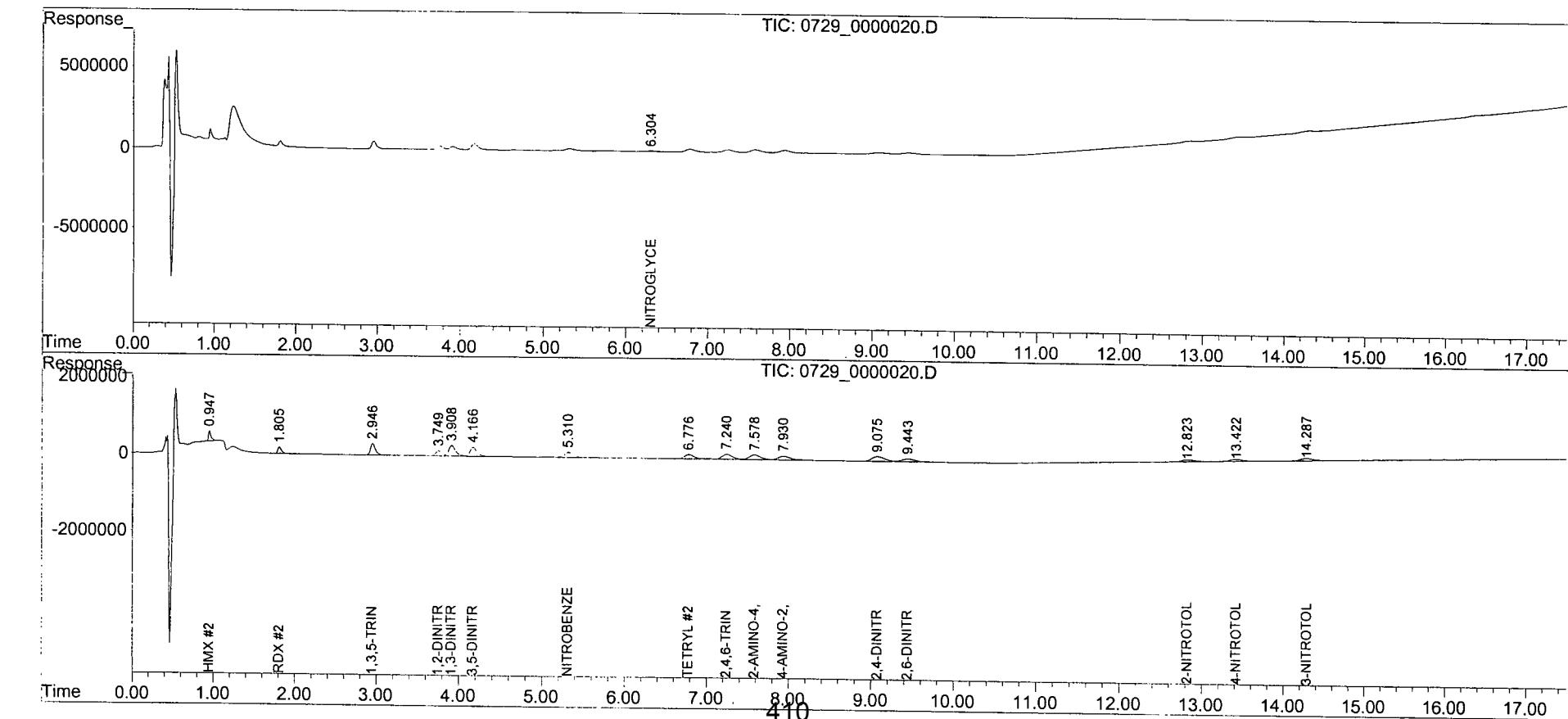
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000020.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 19:58:32
Operator : MP
Sample : 8330_CB 0.010 PPM 07/29/15
Misc :
ALS Vial : 8385 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:58:41 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sun Jun 28 06:23:43 2015
Response via : Initial Calibration
Integrator: ChemStation .

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

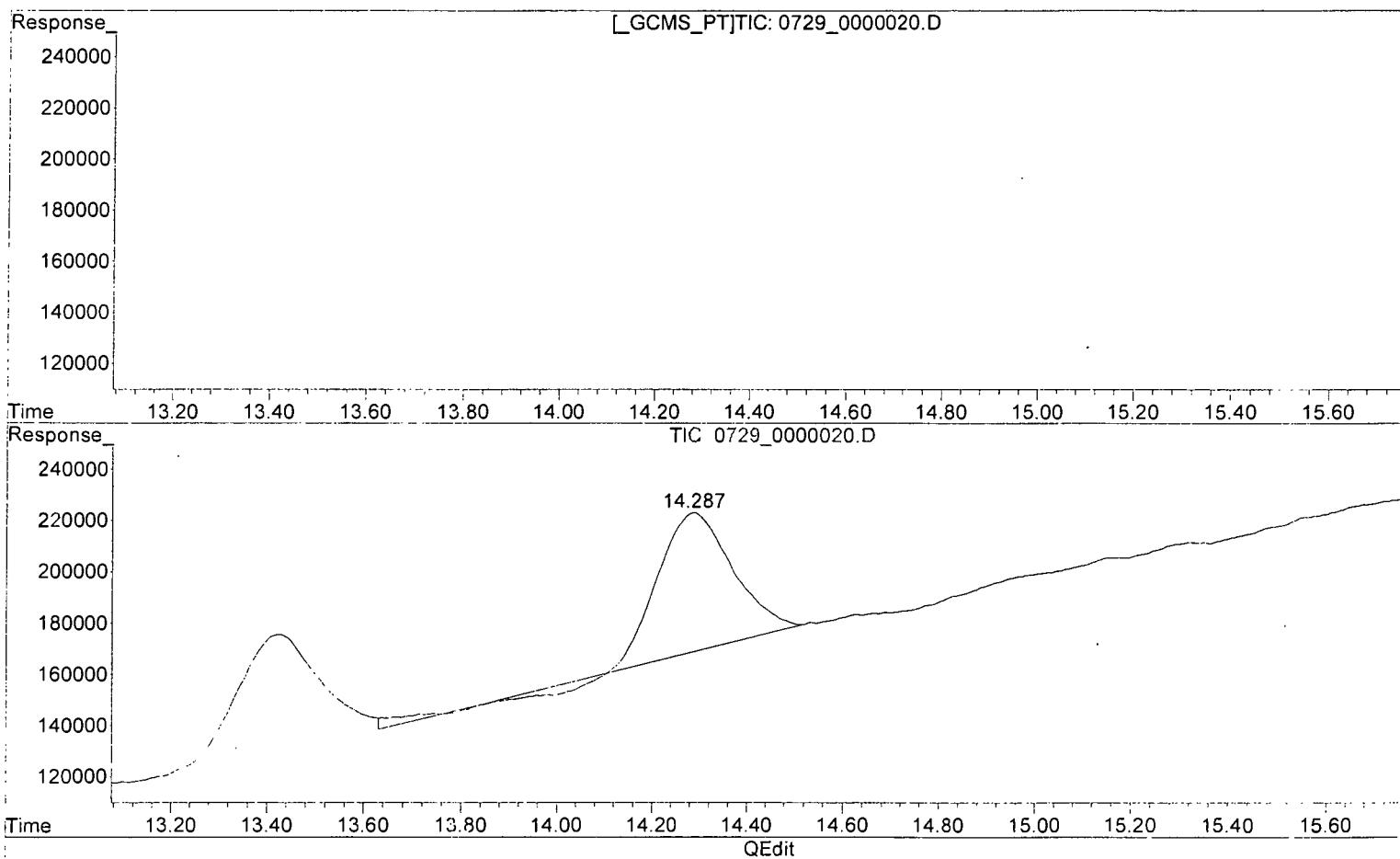


Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000020.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 19:58:32
Operator : MP
Sample : 8330_CB 0.010 PPM 07/29/15
Misc :
ALS Vial : 8385 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:48:13 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sun Jun 28 06:23:43 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m



(17) 3-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(17) 3-NITROTOLUENE #2 (TM)

14.286min 8.734 ppb

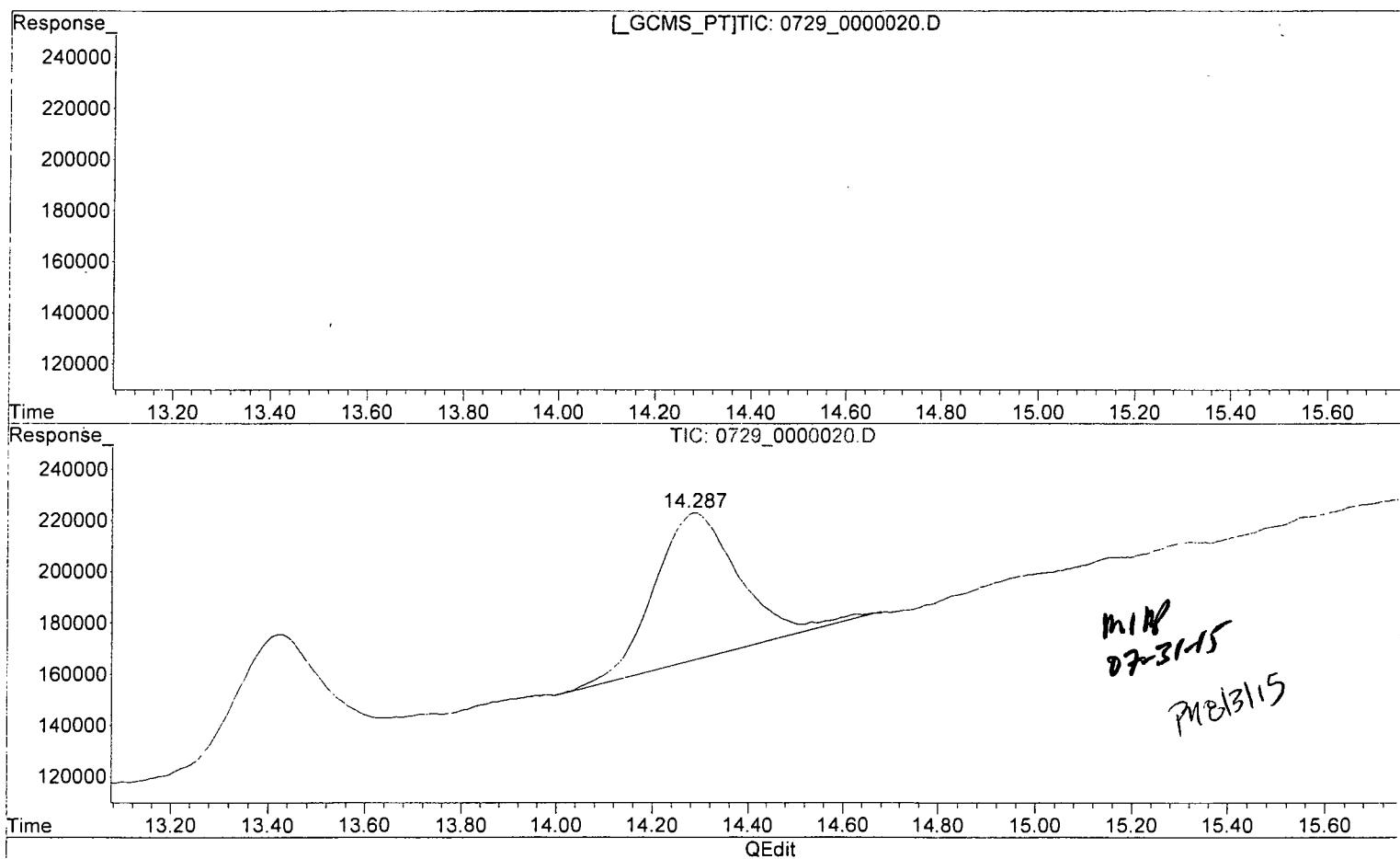
response 54252

Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000020.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 19:58:32
 Operator : MP
 Sample : 8330_CB 0.010 PPM 07/29/15
 Misc :
 ALS Vial : 8385 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:48:13 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m



(17) 3-NITROTOLUENE (TM)

0.000min 0.000 ppb

response 0

(17) 3-NITROTOLUENE #2 (TM)

14.287min 9.265 ppb m

response 57549

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000021.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 20:26:03
 Operator : MP
 Sample : 8330_CB 0.020 PPM 07/29/15
 Misc :
 ALS Vial : 8386 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:57:00 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>							
4) S	1,2-DINIT...	0.000	3.753	0	260034	N.D.	18.184 #
Spiked Amount 62.500							
<hr/>							
System Monitoring Compounds							
1)	TM HMX	0.000	0.947	0	537161	N.D.	19.258m#
2)	TM RDX	0.000	1.807	0	341095	N.D.	18.786 #
3)	TM 1,3,5-TRI...	0.000	2.949	0	603927	N.D.	18.379 #
5)	TM 1,3-DINIT...	0.000	3.912	0	557773	N.D.	18.336 #
6)	TM 3,5-DINIT...	0.000	4.170	0	479130	N.D.	18.242 #
7)	TM NITROBENZENE	0.000	5.314	0	253497	N.D.	18.228 #
8)	TM NITROGLYC...	6.304	0.000	104303	0	17.319	N.D. #
9)	TM TETRYL	6.781	6.781	360194	216552	NoCal	19.496 #
10)	TM 2,4,6-TRI...	7.244	7.243	333165	252781	NoCal	18.011 #
11)	TM 2-AMINO-4...	7.581	7.581	368136	240914	NoCal	17.895 #
12)	TM 4-AMINO-2...	7.935	7.936	335310	178588	NoCal	17.899 #
13)	TM 2,4-DINIT...	9.076	9.077	172104	232691	NoCal	17.841 #
14)	TM 2,6-DINIT...	9.448	9.446	187432	133858	NoCal	18.156 #
15)	TM 2-NITROTO...	0.000	12.828	0	97935	N.D.	18.416 #
16)	TM 4-NITROTO...	0.000	13.420	0	93159	N.D.	17.829 #
17)	TM 3-NITROTO...	0.000	14.282	0	113368	N.D.	18.252 #
18)	TM PETN	16.365	0.000	100347	0	19.794m	N.D. #
<hr/>							

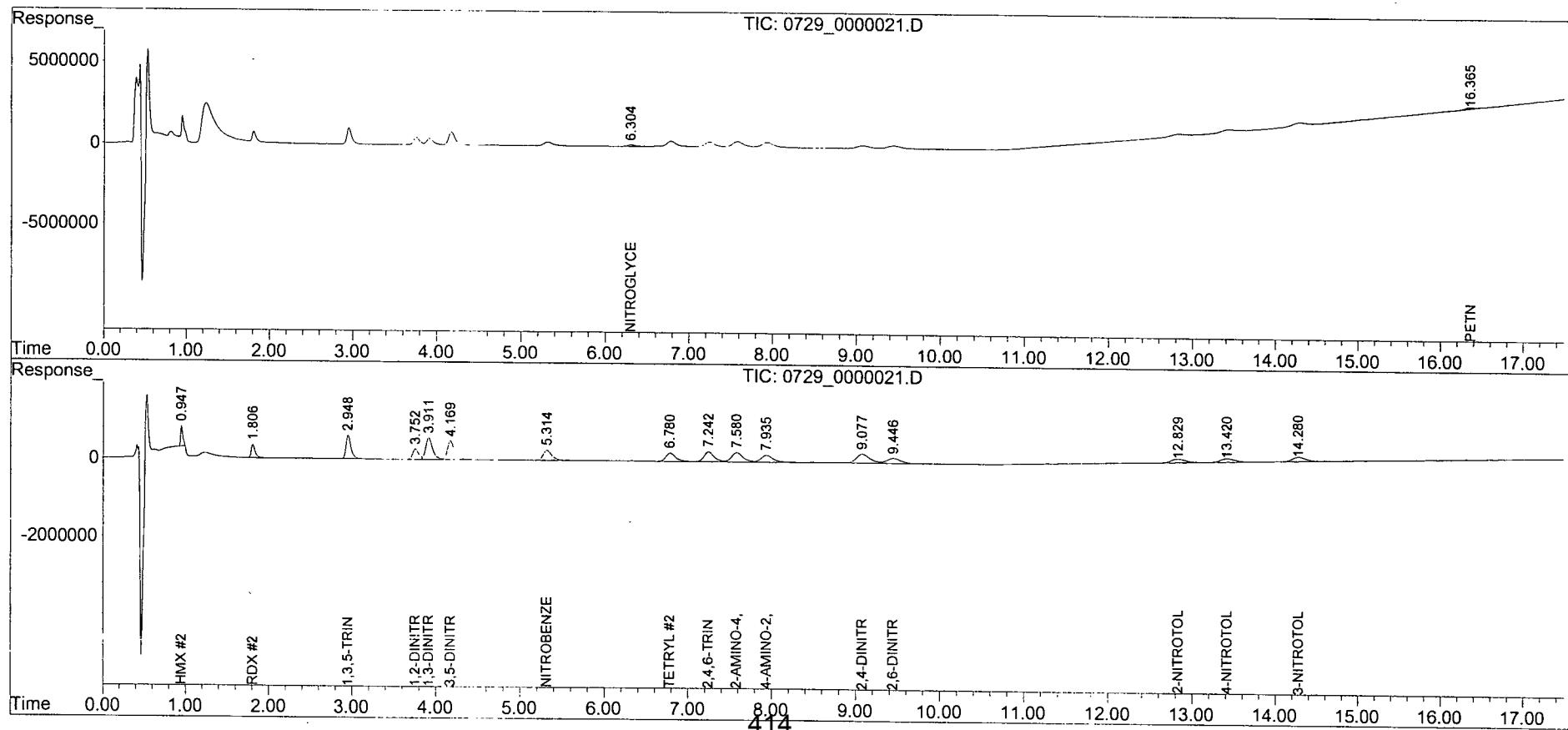
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000021.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 20:26:03
Operator : MP
Sample : 8330_CB 0.020 PPM 07/29/15
Misc :
ALS Vial : 8386 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:57:00 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sun Jun 28 06:23:43 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

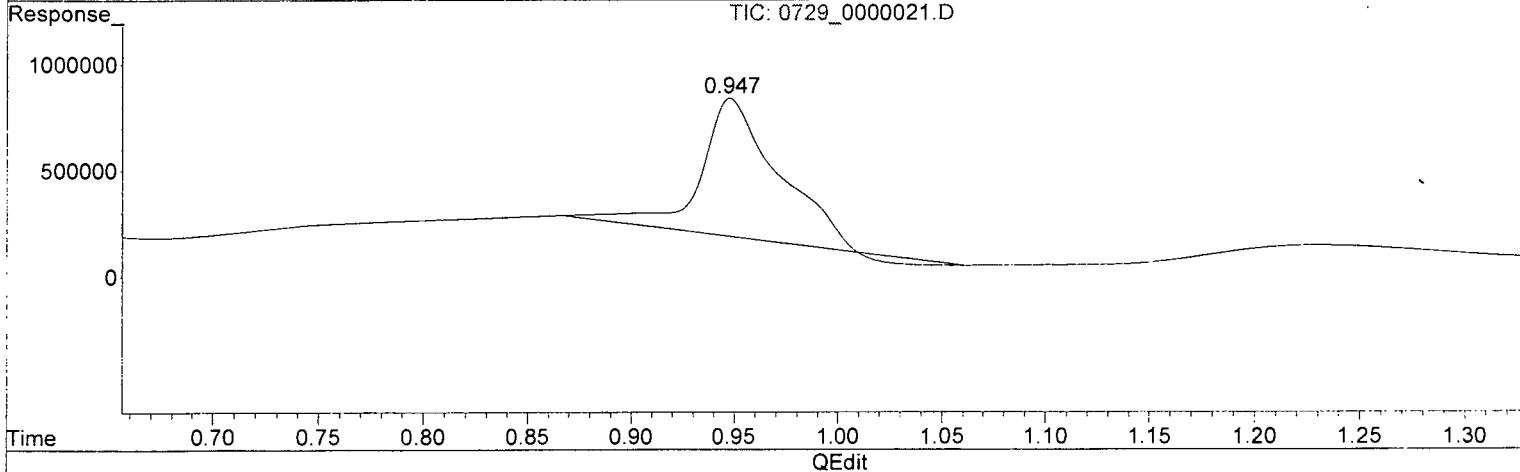
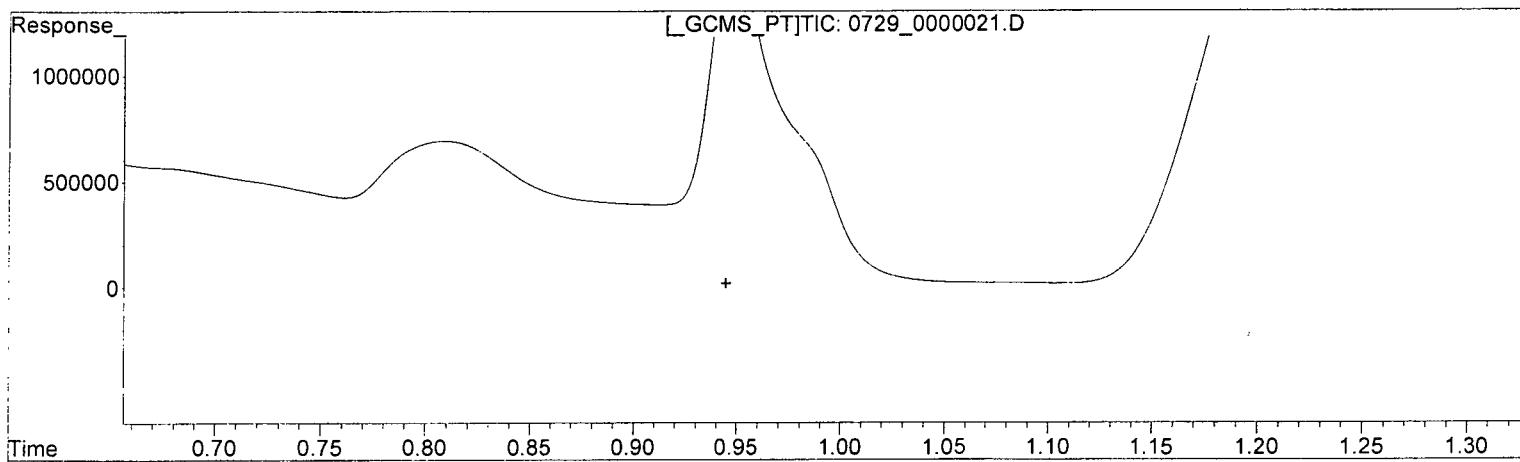


Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000021.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 20:26:03
 Operator : MP
 Sample : 8330_CB 0.020 PPM 07/29/15
 Misc :
 ALS Vial : 8386 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:48:16 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0:



(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

0.949min 23.208 ppb

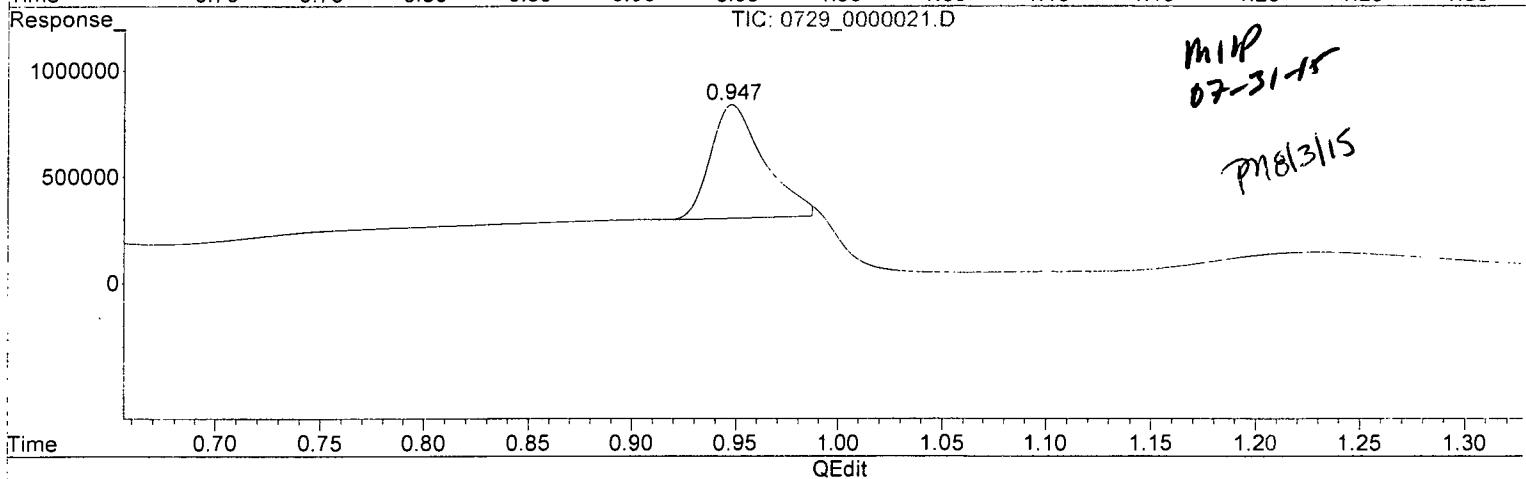
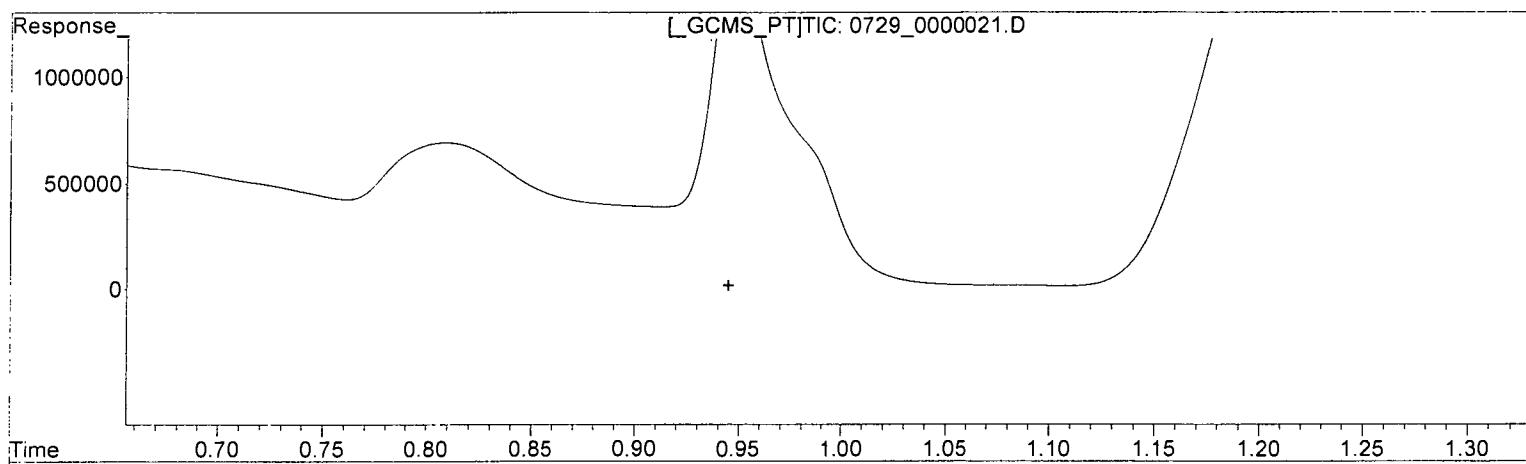
response 647352

Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000021.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 20:26:03
 Operator : MP
 Sample : 8330_CB 0.020 PPM 07/29/15
 Misc :
 ALS Vial : 8386 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:48:16 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0:



(1) HMX (TM)

0.000min 0.000 ppb

response 0

(1) HMX #2 (TM)

0.947min 19.258 ppb m

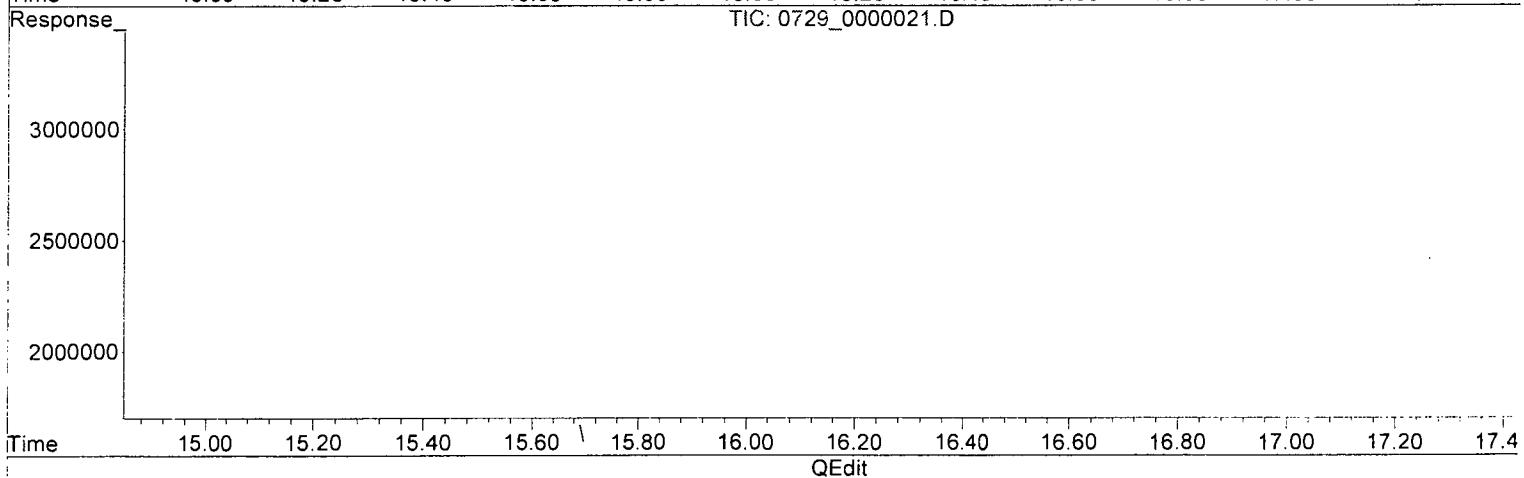
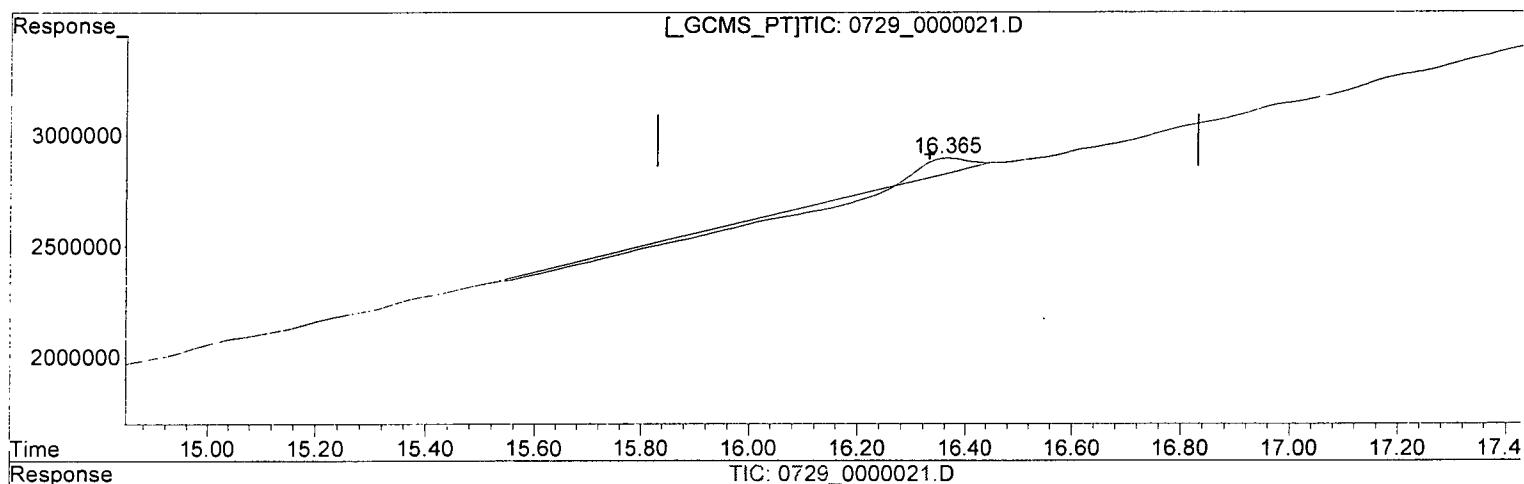
response 537161

Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000021.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 20:26:03
Operator : MP
Sample : 8330_CB 0.020 PPM 07/29/15
Misc :
ALS Vial : 8386 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:48:16 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sun Jun 28 06:23:43 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m



(18) PETN (TM)
16.364min 13.459 ppb
response 68231

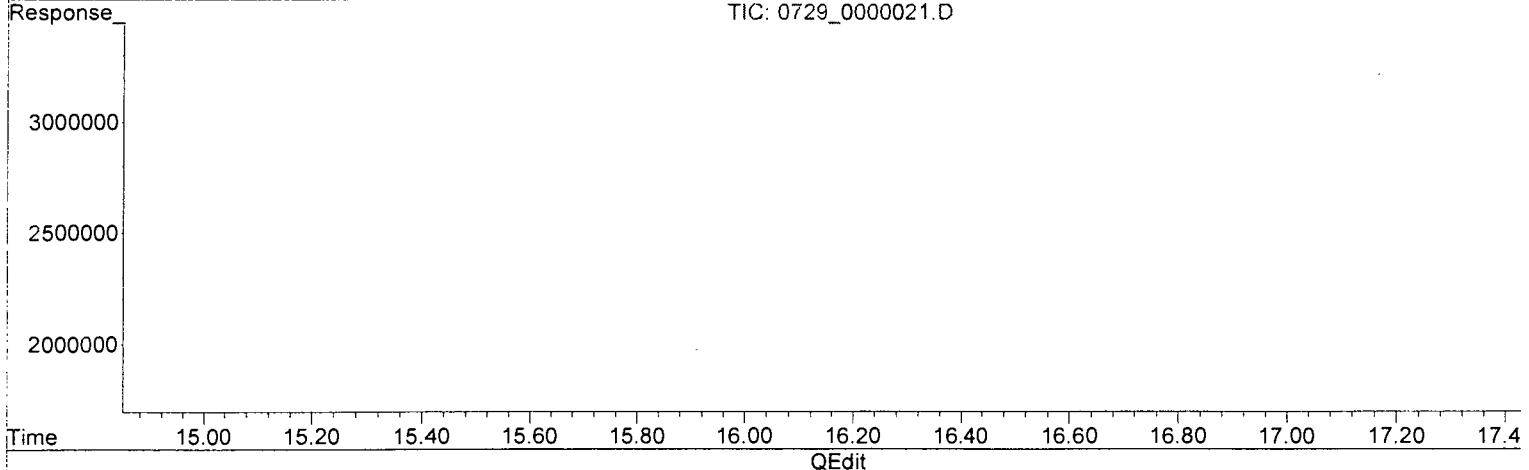
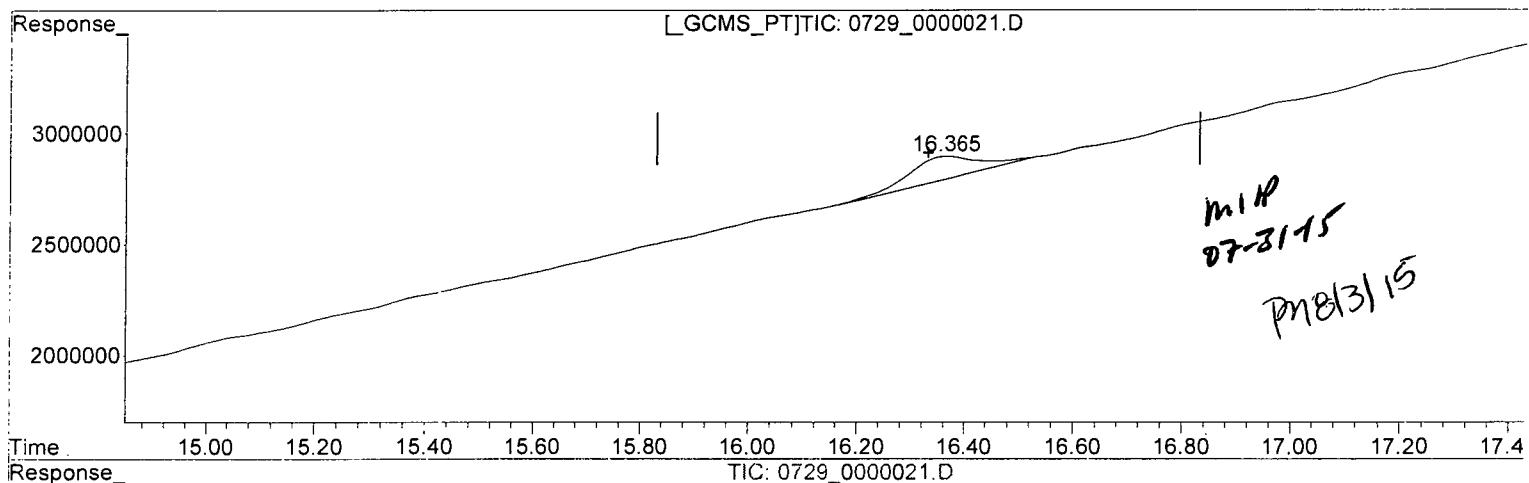
(18) PETN #2 (TM)
0.000min 0.000 ppb
response 0

Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000021.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 20:26:03
 Operator : MP
 Sample : 8330_CB 0.020 PPM 07/29/15
 Misc :
 ALS Vial : 8386 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:48:16 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m



(18) PETN (TM)

16.365min 19.794 ppb m

response 100347

(18) PETN #2 (TM)

0.000min 0.000 ppb

response 0

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000022.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 20:53:33
 Operator : MP
 Sample : 8330_CB 0.050 PPM 07/29/15
 Misc :
 ALS Vial : 8387 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:55:42 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
----------	------	------	--------	--------	-----	-----

System Monitoring Compounds

4) S 1,2-DINIT...	0.000	3.743	0	643076	N.D.	44.971 #
Spiked Amount	62.500		Recovery	=	0.00%	71.95%

Target Compounds

1) TM HMX	0.000	0.945	0	1337541	N.D.	47.953m#
2) TM RDX	0.000	1.803	0	842023	N.D.	46.376 #
3) TM 1,3,5-TRI...	0.000	2.942	0	1498078	N.D.	45.589 #
5) TM 1,3-DINIT...	0.000	3.902	0	1379071	N.D.	45.336 #
6) TM 3,5-DINIT...	0.000	4.158	0	1182737	N.D.	45.031 #
7) TM NITROBENZENE	0.000	5.305	0	627085	N.D.	45.092 #
8) TM NITROGLYC...	6.295	0.000	262113	0	43.524	N.D. #
9) TM TETRYL	6.765	6.765	863161	525154	NoCal	47.280 #
10) TM 2,4,6-TRI...	7.229	7.229	785779	621728	NoCal	44.299 #
11) TM 2-AMINO-4...	7.559	7.559	890982	593586	NoCal	44.090 #
12) TM 4-AMINO-2...	7.914	7.915	804008	439902	NoCal	44.088 #
13) TM 2,4-DINIT...	9.058	9.057	427546	572849	NoCal	43.922 #
14) TM 2,6-DINIT...	9.424	9.425	460960	323521	NoCal	43.881 #
15) TM 2-NITROTO...	0.000	12.804	0	234323	N.D.	44.063 #
16) TM 4-NITROTO...	0.000	13.400	0	229692	N.D.	43.960 #
17) TM 3-NITROTO...	0.000	14.263	0	277567	N.D.	44.688 #
18) TM PETN	16.340	0.000	234729	0	46.301m	N.D. #

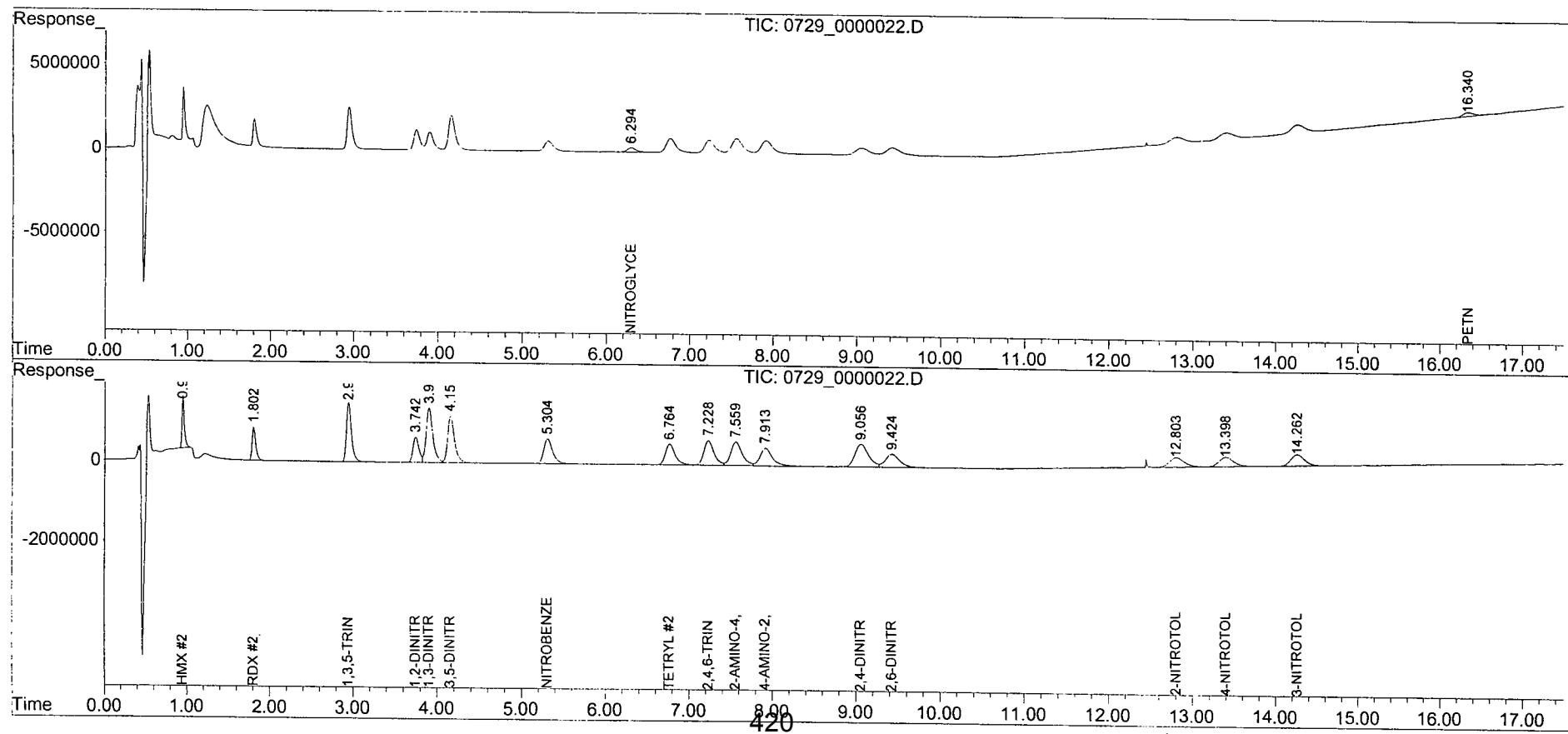
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000022.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 20:53:33
Operator : MP
Sample : 8330_CB 0.050 PPM 07/29/15
Misc :
ALS Vial : 8387 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:55:42 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sun Jun 28 06:23:43 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

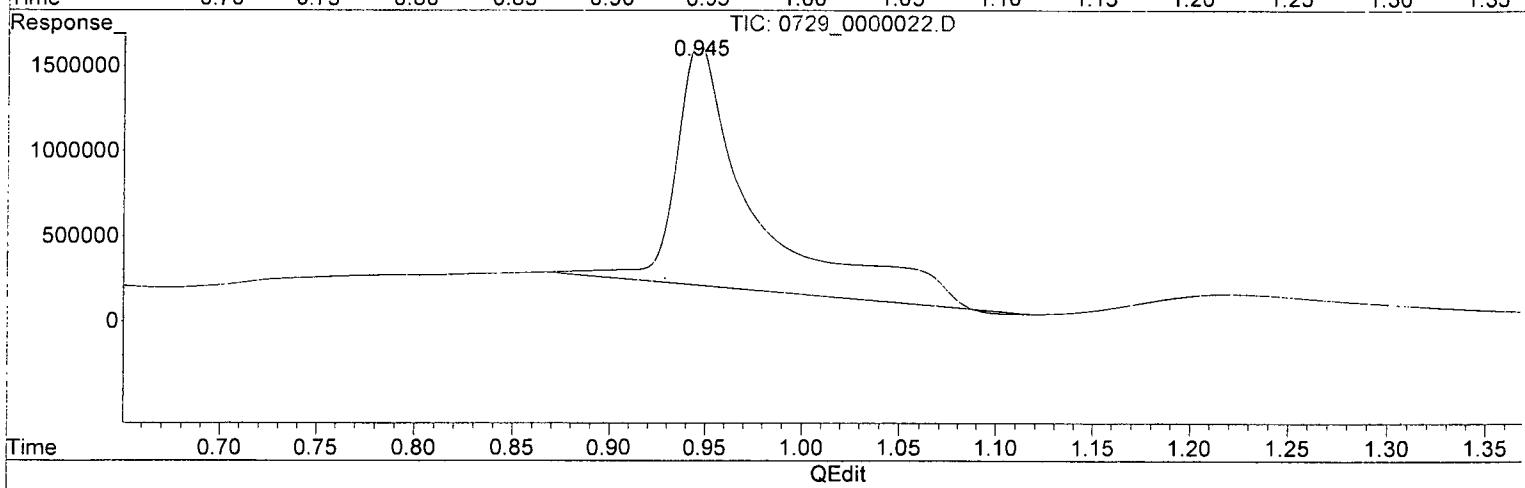
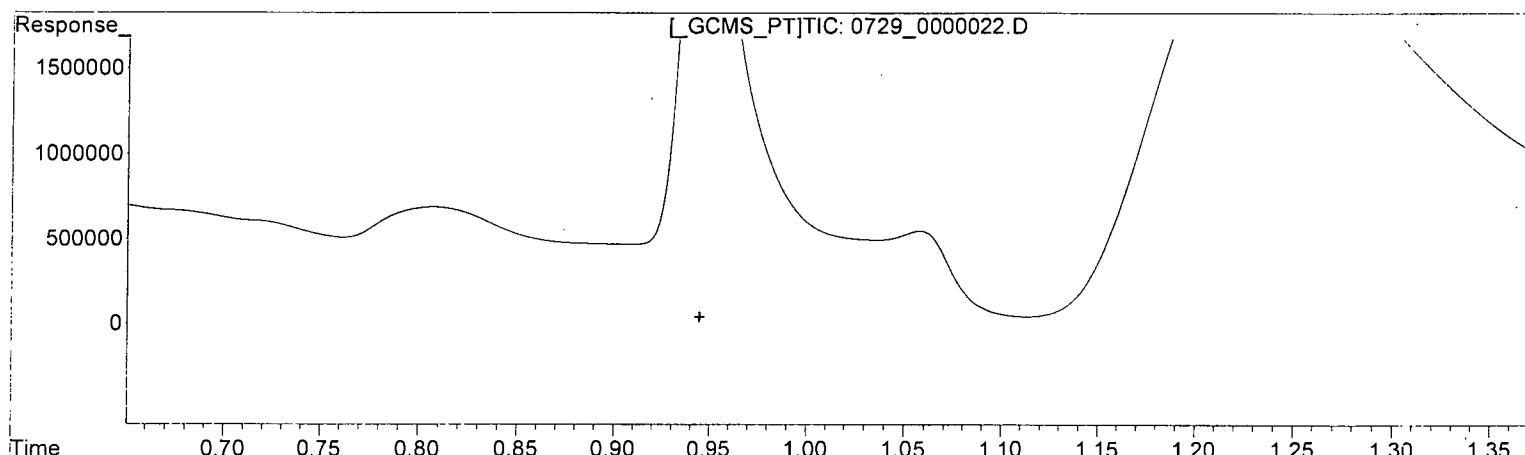


Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000022.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 20:53:33
Operator : MP
Sample : 8330_CB 0.050 PPM 07/29/15
Misc :
ALS Vial : 8387 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:48:19 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sun Jun 28 06:23:43 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m



(1) HMX (TM)
0.000min 0.000 ppb
response 0

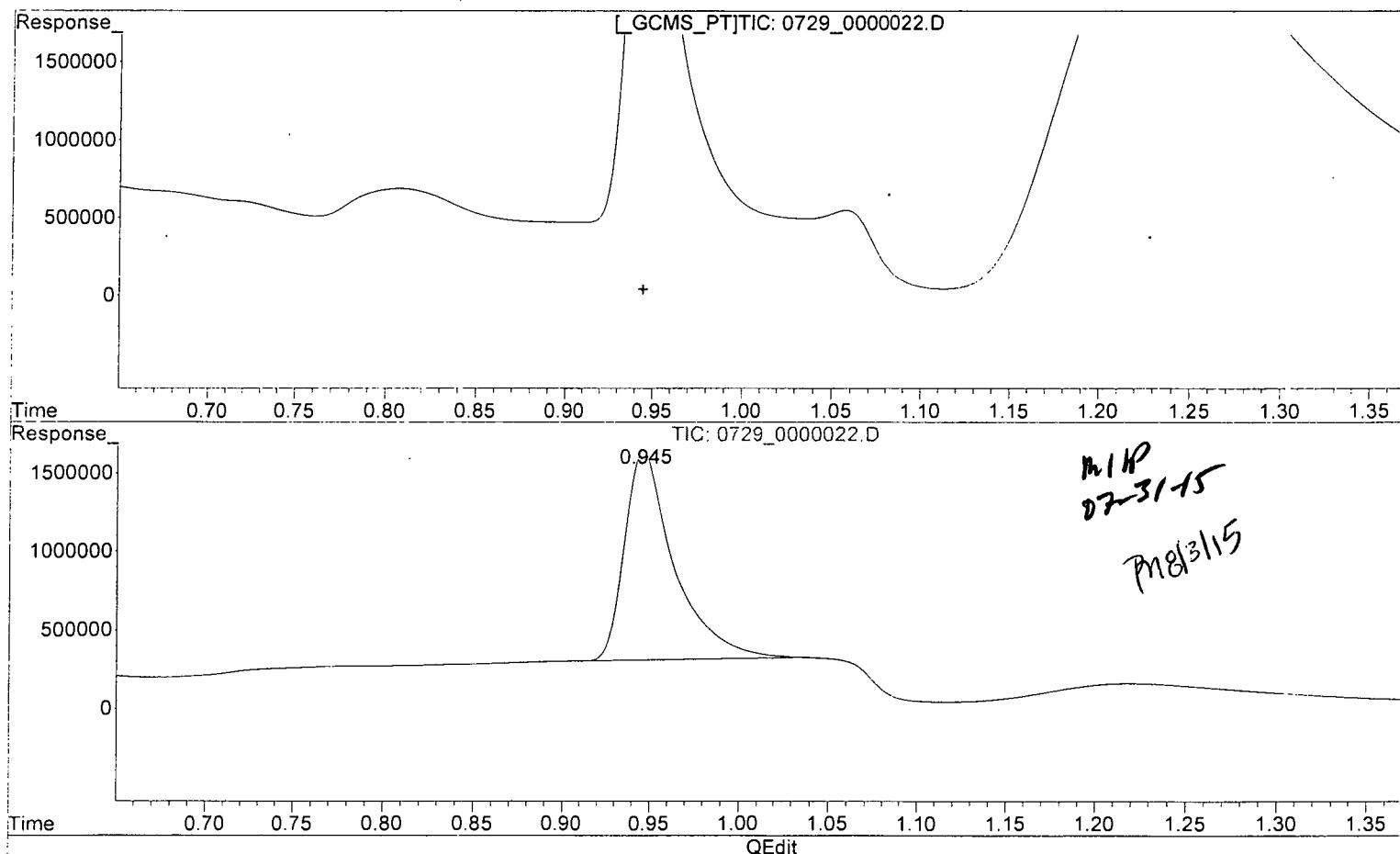
(1) HMX #2 (TM)
0.947min 51.046 ppb
response 1423828

Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000022.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 20:53:33
 Operator : MP
 Sample : 8330_CB 0.050 PPM 07/29/15
 Misc :
 ALS Vial : 8387 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:48:19 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0



(1) HMX (TM)
 0.000min 0.000 ppb
 response 0

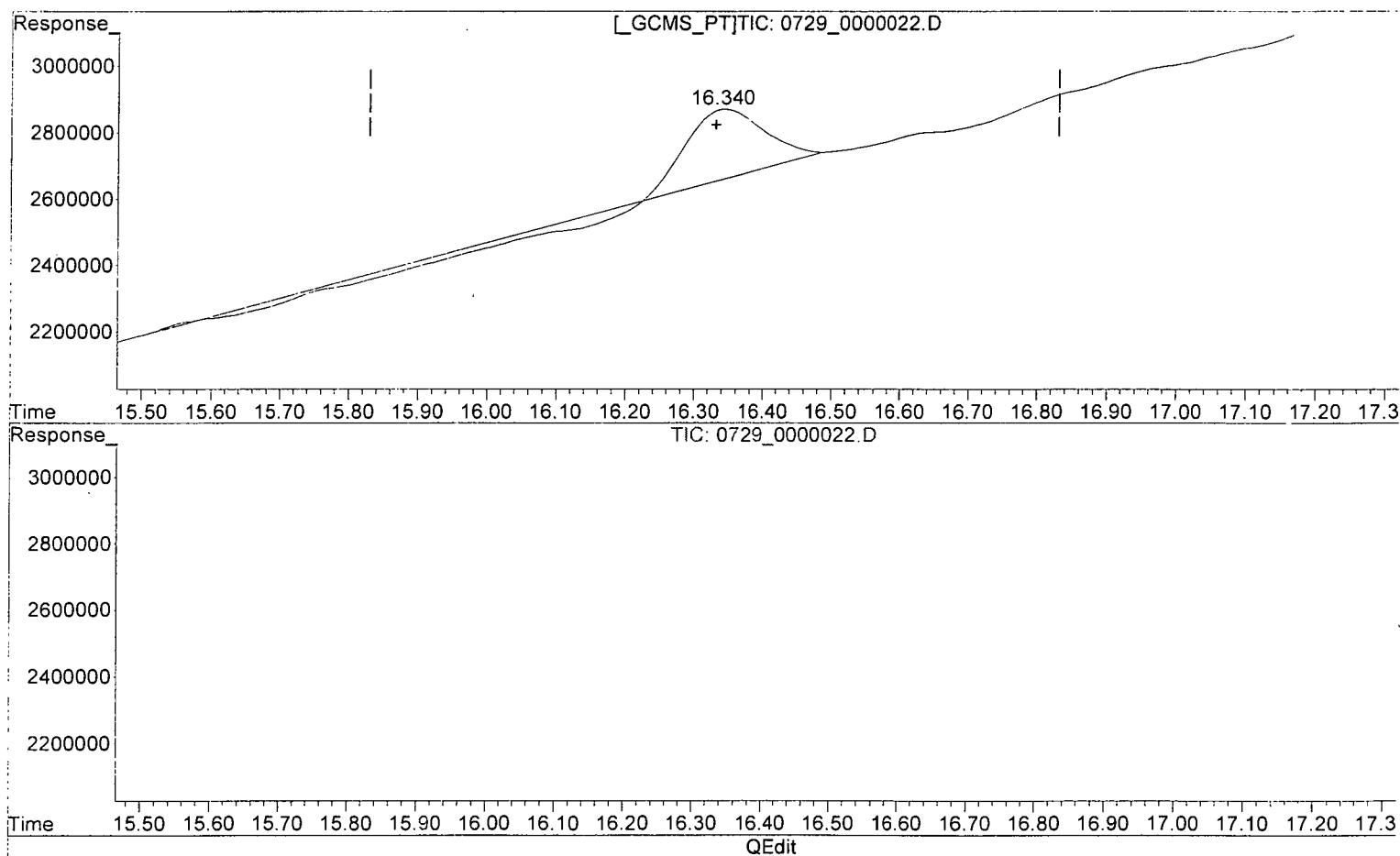
(1) HMX #2 (TM)
 0.945min 47.953 ppb m
 response 1337541

Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000022.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 20:53:33
Operator : MP
Sample : 8330_CB 0.050 PPM 07/29/15
Misc :
ALS Vial : 8387 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:48:19 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sun Jun 28 06:23:43 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0i



(18) PETN (TM)

16.343min 41.269 ppb

response 209221

(18) PETN #2 (TM)

0.000min 0.000 ppb

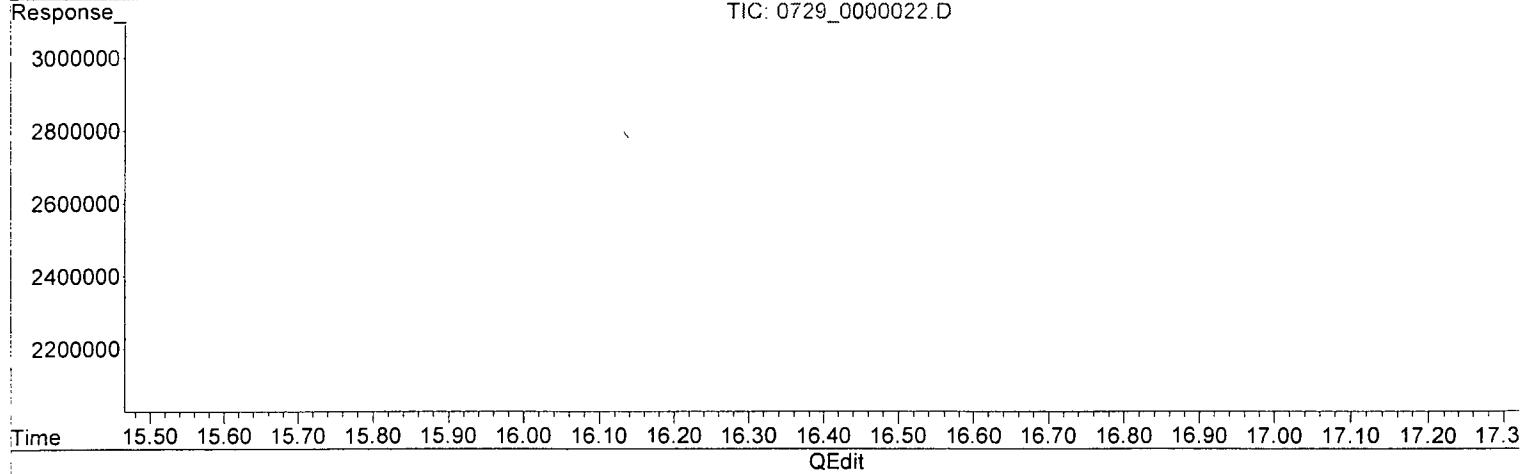
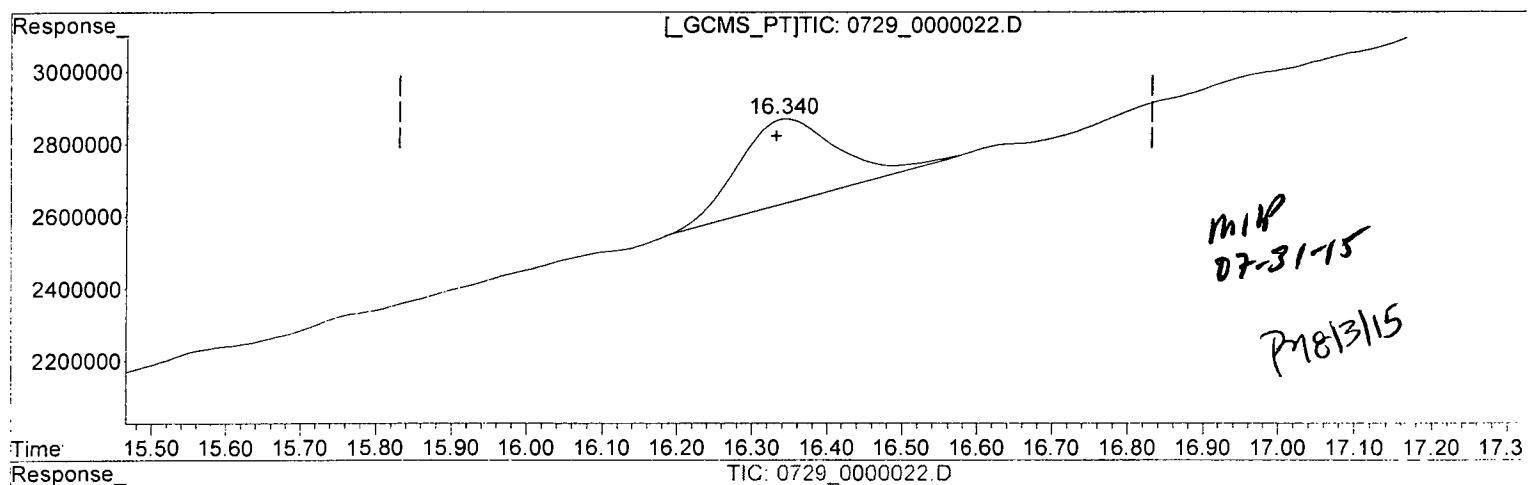
response 0

Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000022.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 20:53:33
 Operator : MP
 Sample : 8330_CB 0.050 PPM 07/29/15
 Misc :
 ALS Vial : 8387 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:48:19 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.01



(18) PETN (TM)
 16.340min 46.301 ppb m
 response 234729

(18) PETN #2 (TM)
 0.000min 0.000 ppb
 response 0

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000023.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Accq On : 29-Jul-2015, 21:21:04
 Operator : MP
 Sample : 8330_CB 0.10 PPM 07/29/15
 Misc :
 ALS Vial : 8388 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:48:22 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>							
4)	S 1,2-DINIT...	0.000	3.743	0	1286784	N.D.	89.986 #
	Spiked Amount	62.500		Recovery	=	0.00%	143.98%
<hr/>							
System Monitoring Compounds							
1)	TM HMX	0.000	0.946	0	2654731	N.D.	95.176 #
2)	TM RDX	0.000	1.802	0	1682527	N.D.	92.668 #
3)	TM 1,3,5-TRI...	0.000	2.942	0	3000792	N.D.	91.319 #
5)	TM 1,3-DINIT...	0.000	3.902	0	2766787	N.D.	90.956 #
6)	TM 3,5-DINIT...	0.000	4.158	0	2375158	N.D.	90.432 #
7)	TM NITROBENZENE	0.000	5.304	0	1251522	N.D.	89.994 #
8)	TM NITROGLYC...	6.294	0.000	519242	0	86.220	N.D. #
9)	TM TETRYL	6.765	6.765	1695504	1037048	NoCal	93.366 #
10)	TM 2,4,6-TRI...	7.230	7.230	1582971	1240717	NoCal	88.403 #
11)	TM 2-AMINO-4...	7.563	7.563	1771894	1184384	NoCal	87.973 #
12)	TM 4-AMINO-2...	7.919	7.918	1617196	874384	NoCal	87.634 #
13)	TM 2,4-DINIT...	9.062	9.062	849780	1147073	NoCal	87.949 #
14)	TM 2,6-DINIT...	9.432	9.431	912252	650578	NoCal	88.241 #
15)	TM 2-NITROTO...	0.000	12.810	0	467613	N.D.	87.932 #
16)	TM 4-NITROTO...	0.000	13.405	0	462580	N.D.	88.532 #
17)	TM 3-NITROTO...	0.000	14.270	0	553015	N.D.	89.035 #
18)	TM PETN	16.348	0.000	425363	0	83.904	N.D. #
<hr/>							

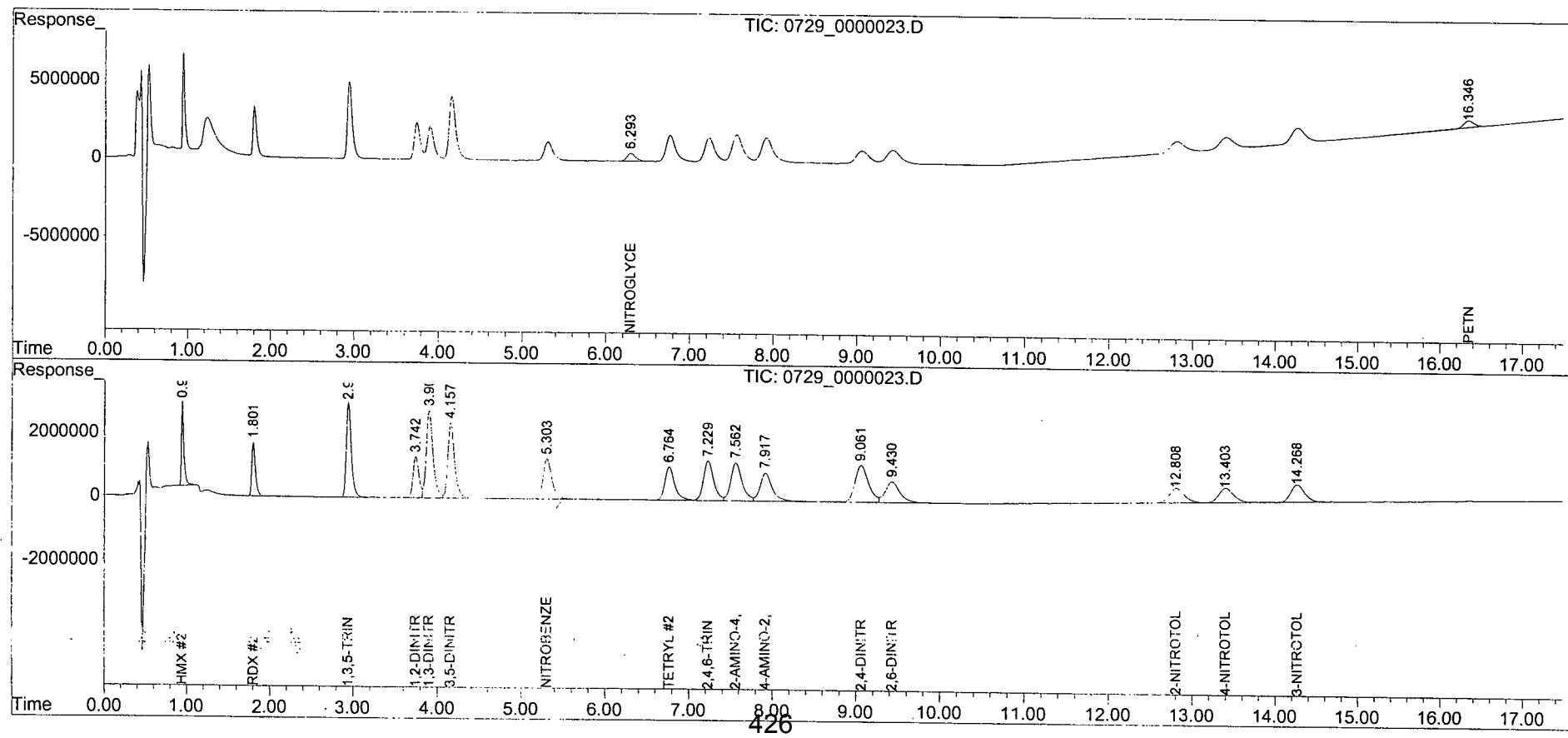
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (OT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000023.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 21:21:04
Operator : MP
Sample : 8330_CB 0.10 PPM 07/29/15
Misc :
ALS Vial : 8388 Sample Multiplier: 1

```
Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:48:22 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title  : 8330B - Soil - Waldorf
QLast Update : Sun Jun 28 06:23:43 2015
Response via : Initial Calibration
Integrator: ChemStation
```

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000024.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 21:48:35
 Operator : MP
 Sample : 8330_CB 0.20 PPM 07/29/15
 Misc :
 ALS Vial : 8389 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:53:20 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
----------	------	------	--------	--------	-----	-----

System Monitoring Compounds

4) S 1,2-DINIT...	0.000	3.742	0	2605409	N.D.	182.198	#
Spiked Amount	62.500		Recovery	=	0.00%	291.52%	

Target Compounds

1) TM HMX	0.000	0.946	0	5384098	N.D.	193.027	m#
2) TM RDX	0.000	1.804	0	3394535	N.D.	186.959	#
3) TM 1,3,5-TRI...	0.000	2.942	0	6067347	N.D.	184.640	#
5) TM 1,3-DINIT...	0.000	3.901	0	5598551	N.D.	184.048	#
6) TM 3,5-DINIT...	0.000	4.158	0	4796872	N.D.	182.636	#
7) TM NITROBENZENE	0.000	5.303	0	2534471	N.D.	182.249	#
8) TM NITROGLYC...	6.291	6.291	1059839	18948	175.985	NoCal	#
9) TM TETRYL	6.764	6.764	3476169	2107337	NoCal	189.725	#
10) TM 2,4,6-TRI...	7.227	7.227	3221380	2505505	NoCal	178.521	#
11) TM 2-AMINO-4...	7.564	7.564	3599392	2395101	NoCal	177.903	#
12) TM 4-AMINO-2...	7.919	7.919	3263219	1767163	NoCal	177.111	#
13) TM 2,4-DINIT...	9.060	9.060	1705647	2321781	NoCal	178.017	#
14) TM 2,6-DINIT...	9.431	9.431	1823672	1320362	NoCal	179.088	#
15) TM 2-NITROTO...	0.000	12.810	0	946151	N.D.	177.918	#
16) TM 4-NITROTO...	0.000	13.403	0	935692	N.D.	179.079	#
17) TM 3-NITROTO...	0.000	14.269	0	1120590	N.D.	180.413	#
18) TM PETN	16.343	0.000	892778	0	176.103	N.D.	#

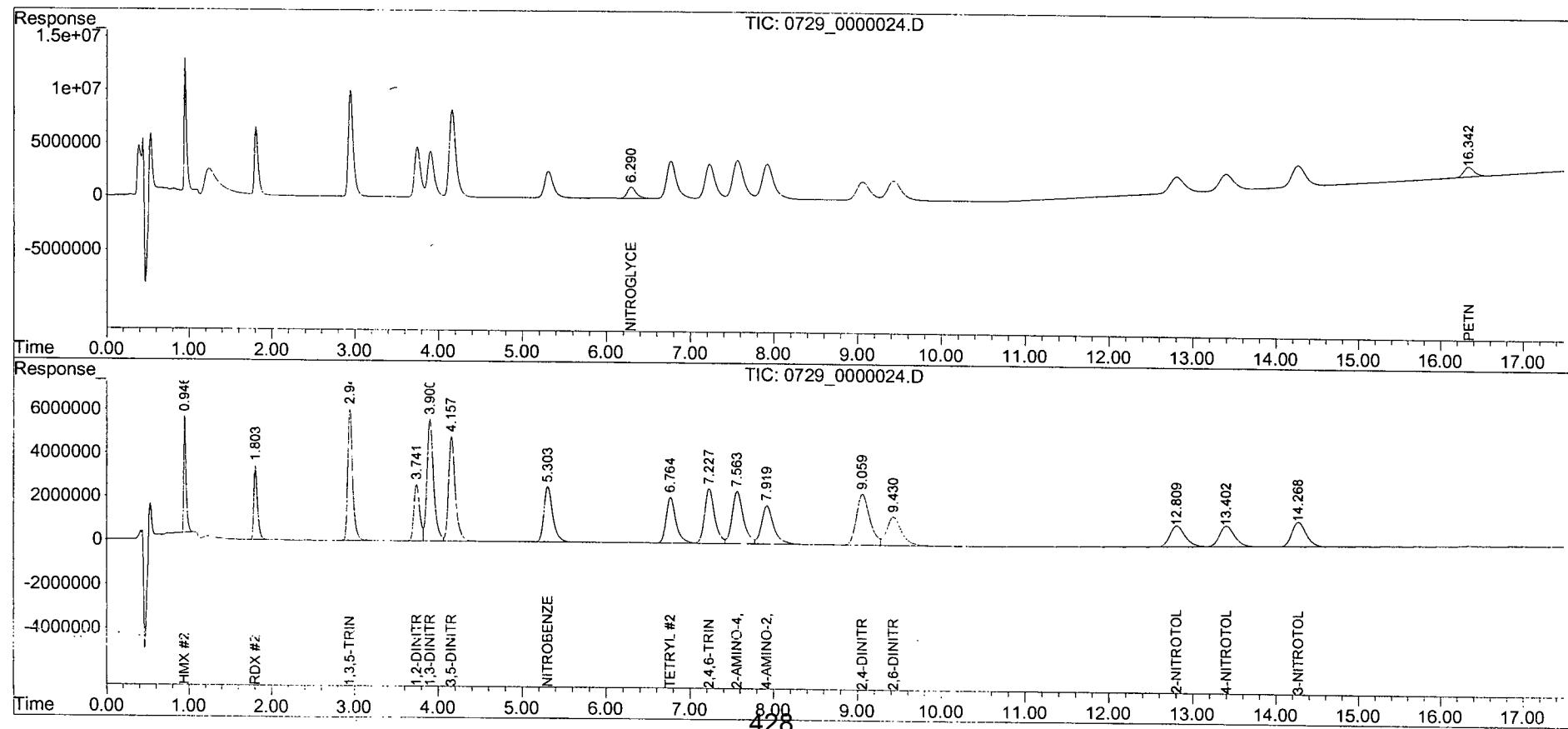
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000024.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 21:48:35
Operator : MP
Sample : 8330_CB 0.20 PPM 07/29/15
Misc :
ALS Vial : 8389 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:53:20 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sun Jun 28 06:23:43 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

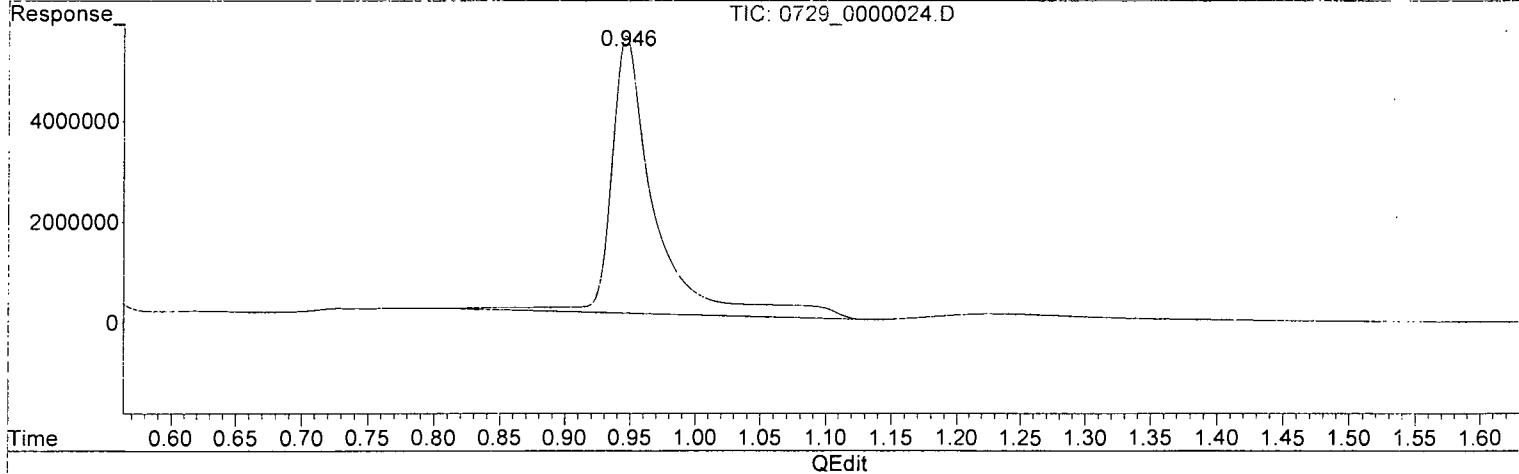
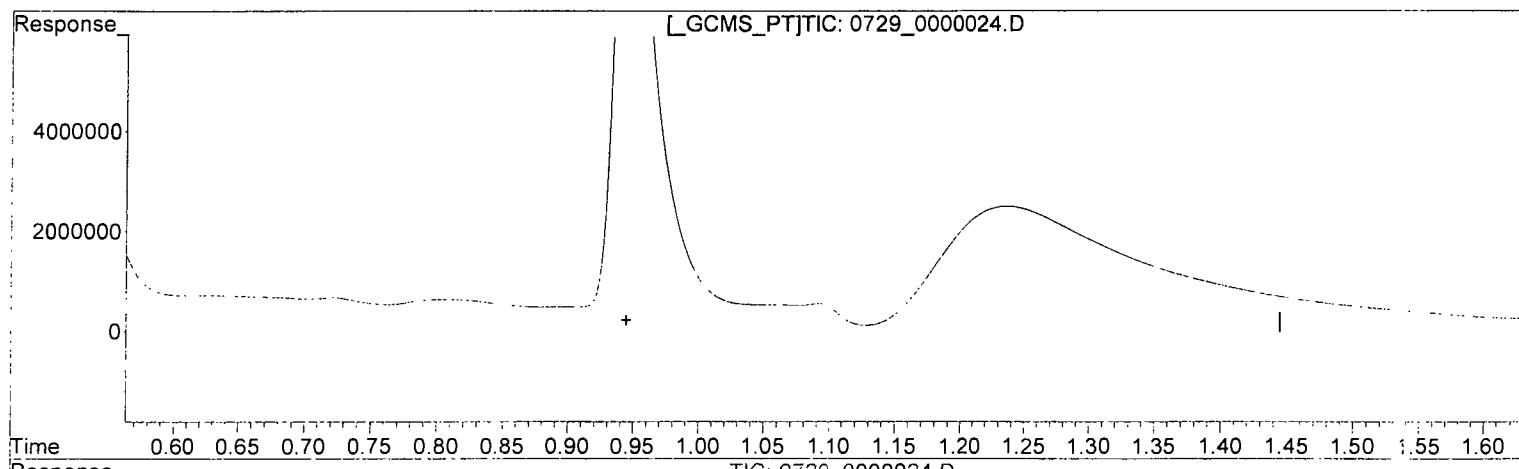


Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000024.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 21:48:35
Operator : MP
Sample : 8330_CB 0.20 PPM 07/29/15
Misc :
ALS Vial : 8389 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:48:25 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sun Jun 28 06:23:43 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m



(1) HMX (TM)
0.000min 0.000 ppb
response 0

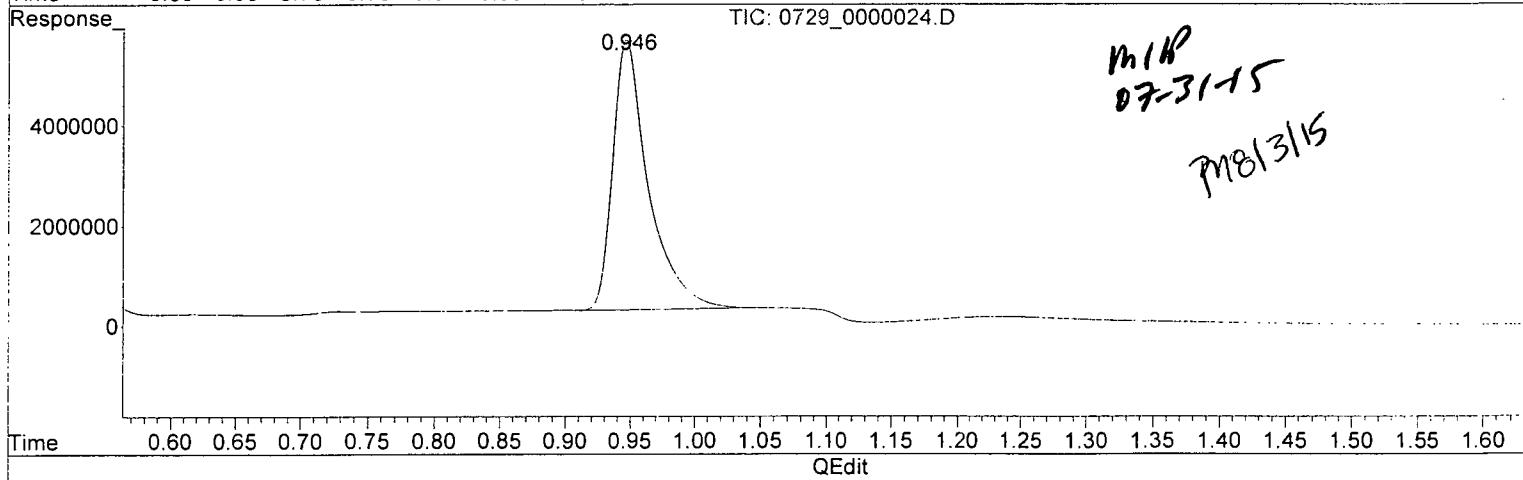
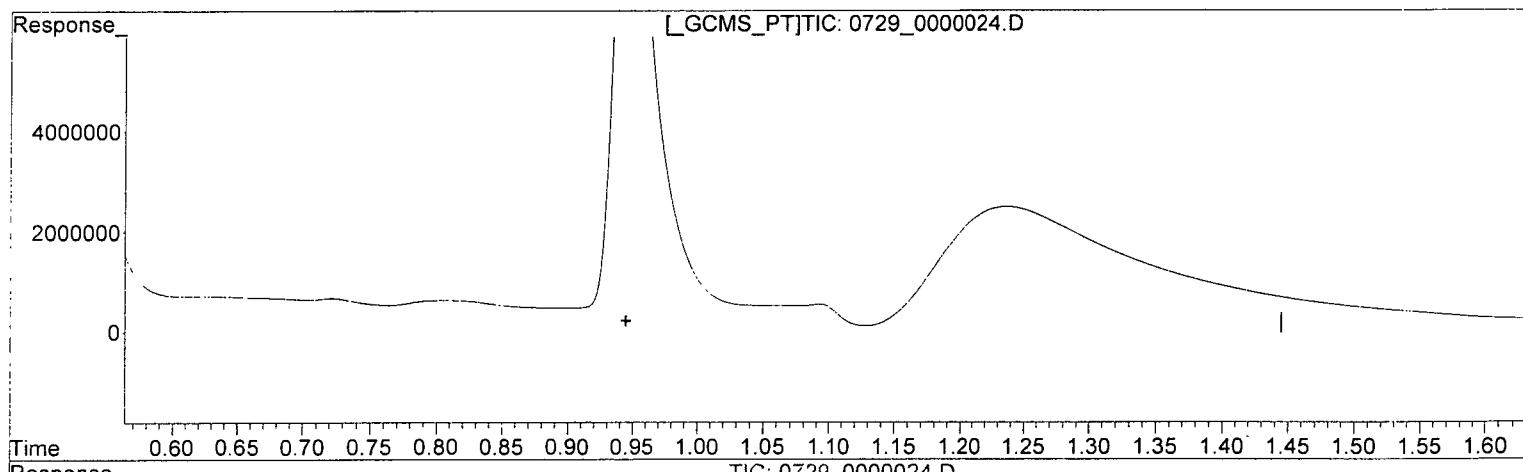
(1) HMX #2 (TM)
0.947min 196.345 ppb
response 5476649

Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000024.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 21:48:35
 Operator : MP
 Sample : 8330_CB 0.20 PPM 07/29/15
 Misc :
 ALS Vial : 8389 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:48:25 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0



(1) HMX (TM)
 0.000min 0.000 ppb
 response 0

(1) HMX #2 (TM)
 0.946min 193.027 ppb m
 response 5384098

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000025.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 22:16:05
 Operator : MP
 Sample : 8330_CB 0.50 PPM 07/29/15
 Misc :
 ALS Vial : 8390 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:48:28 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

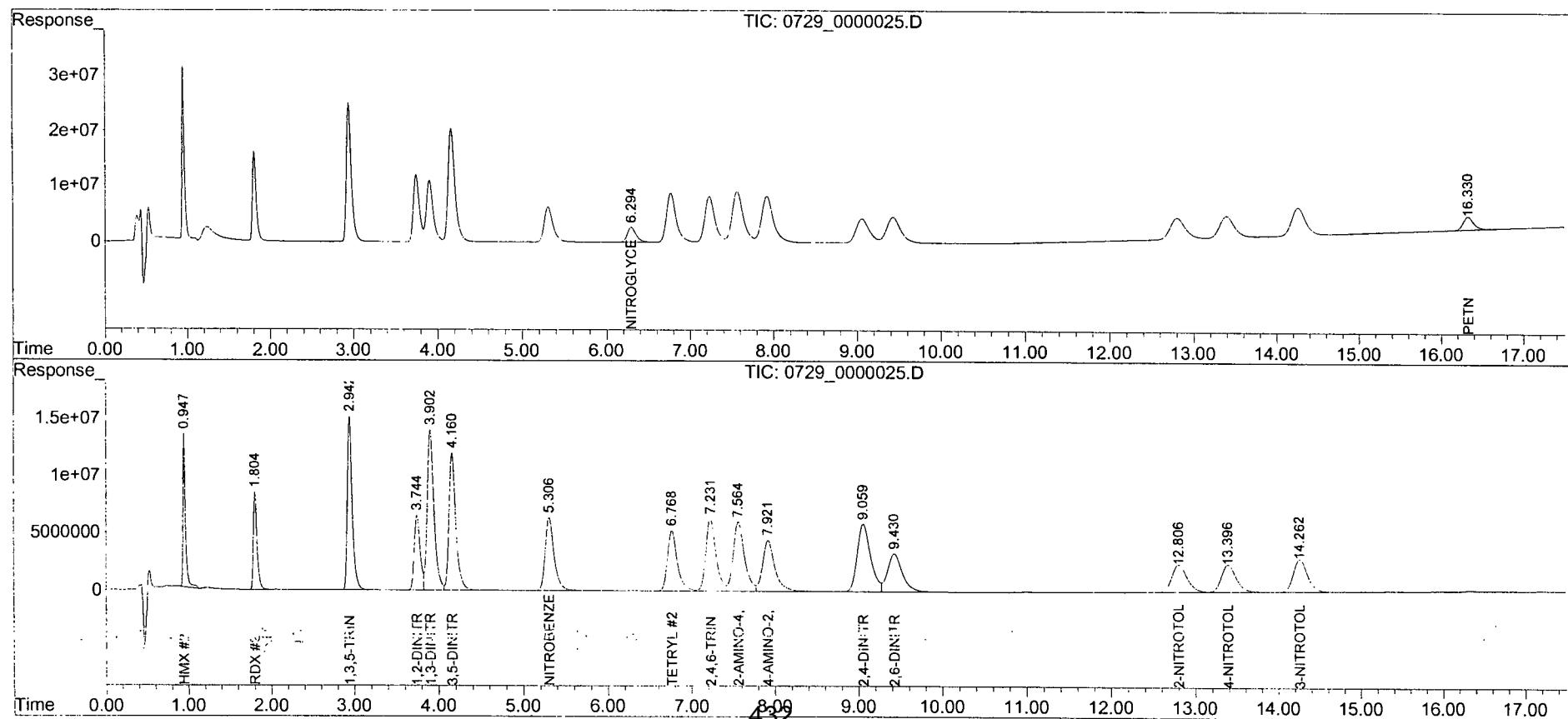
	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>							
System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.745	0	6532357	N.D.	456.812 #
	Spiked Amount	62.500		Recovery	=	0.00%	730.90%
<hr/>							
Target Compounds							
1)	TM HMX	0.000	0.948	0	13386422	N.D.	479.922 #
2)	TM RDX	0.000	1.805	0	8476382	N.D.	466.850 #
3)	TM 1,3,5-TRI...	0.000	2.943	0	15159000	N.D.	461.314 #
5)	TM 1,3-DINIT...	0.000	3.903	0	14037322	N.D.	461.466 #
6)	TM 3,5-DINIT...	0.000	4.160	0	11997765	N.D.	456.802 #
7)	TM NITROBENZENE	0.000	5.306	0	6338732	N.D.	455.806 #
8)	TM NITROGLYC...	6.295	6.296	2631076	46658	436.888	NoCal #
9)	TM TETRYL	6.769	6.769	8629735	5249155	NoCal	472.586 #
10)	TM 2,4,6-TRI...	7.232	7.232	8058378	6282887	NoCal	447.665 #
11)	TM 2-AMINO-4...	7.565	7.565	8990976	5998620	NoCal	445.565 #
12)	TM 4-AMINO-2...	7.921	7.922	8137348	4404918	NoCal	441.476 #
13)	TM 2,4-DINIT...	9.060	9.060	4266470	5837835	NoCal	447.601 #
14)	TM 2,6-DINIT...	9.431	9.431	4559646	3304245	NoCal	448.172 #
15)	TM 2-NITROTO...	0.000	12.806	0	2368653	N.D.	445.412 #
16)	TM 4-NITROTO...	0.000	13.397	0	2349124	N.D.	449.590 #
17)	TM 3-NITROTO...	0.000	14.263	0	2818374	N.D.	453.754 #
18)	TM PETN	16.331	0.000	2302881	0	454.248	N.D. #
<hr/>							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000025.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 22:16:05
Operator : MP
Sample : 8330_CB 0.50 PPM 07/29/15
Misc :
ALS Vial : 8390 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:48:28 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sun Jun 28 06:23:43 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000026.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 22:43:36
 Operator : MP
 Sample : 8330_CB 1.0OPPM 07/29/15
 Misc :
 ALS Vial : 8391 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:48:31 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>							
System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.735	0 13250302	N.D.	926.603	#
	Spiked Amount	62.500		Recovery	=	0.00%	1482.56%
<hr/>							
Target Compounds							
1)	TM HMX	0.000	0.946	0 26427248	N.D.	947.453	#
2)	TM RDX	0.000	1.801	0 17026878	N.D.	937.782	#
3)	TM 1,3,5-TRI...	0.000	2.938	0 30472436	N.D.	927.328	#
5)	TM 1,3-DINIT...	0.000	3.894	0 28403943	N.D.	933.757	#
6)	TM 3,5-DINIT...	0.000	4.149	0 24226140	N.D.	922.385	#
7)	TM NITROBENZENE	0.000	5.296	0 12776495	N.D.	918.733	#
8)	TM NITROGLYC...	6.285	6.285	5275344 95674	875.967	NoCal	#
9)	TM TETRYL	6.752	6.752	17403100 10587610	NoCal	953.212	#
10)	TM 2,4,6-TRI...	7.219	7.218	16278600 12694641	NoCal	904.512	#
11)	TM 2-AMINO-4...	7.543	7.543	18183930 12146742	NoCal	902.234	#
12)	TM 4-AMINO-2...	7.899	7.899	16441739 8895963	NoCal	891.584	#
13)	TM 2,4-DINIT...	9.041	9.041	8652650 11827472	NoCal	906.842	#
14)	TM 2,6-DINIT...	9.414	9.413	9180776 6664528	NoCal	903.945	#
15)	TM 2-NITROTO...	0.000	12.797	0 4763672	N.D.	895.781	#
16)	TM 4-NITROTO...	0.000	13.387	0 4730365	N.D.	905.327	#
17)	TM 3-NITROTO...	0.000	14.256	0 5673023	N.D.	913.348	#
18)	TM PETN	16.331	0.000	4642193	0 915.683	N.D.	#
<hr/>							

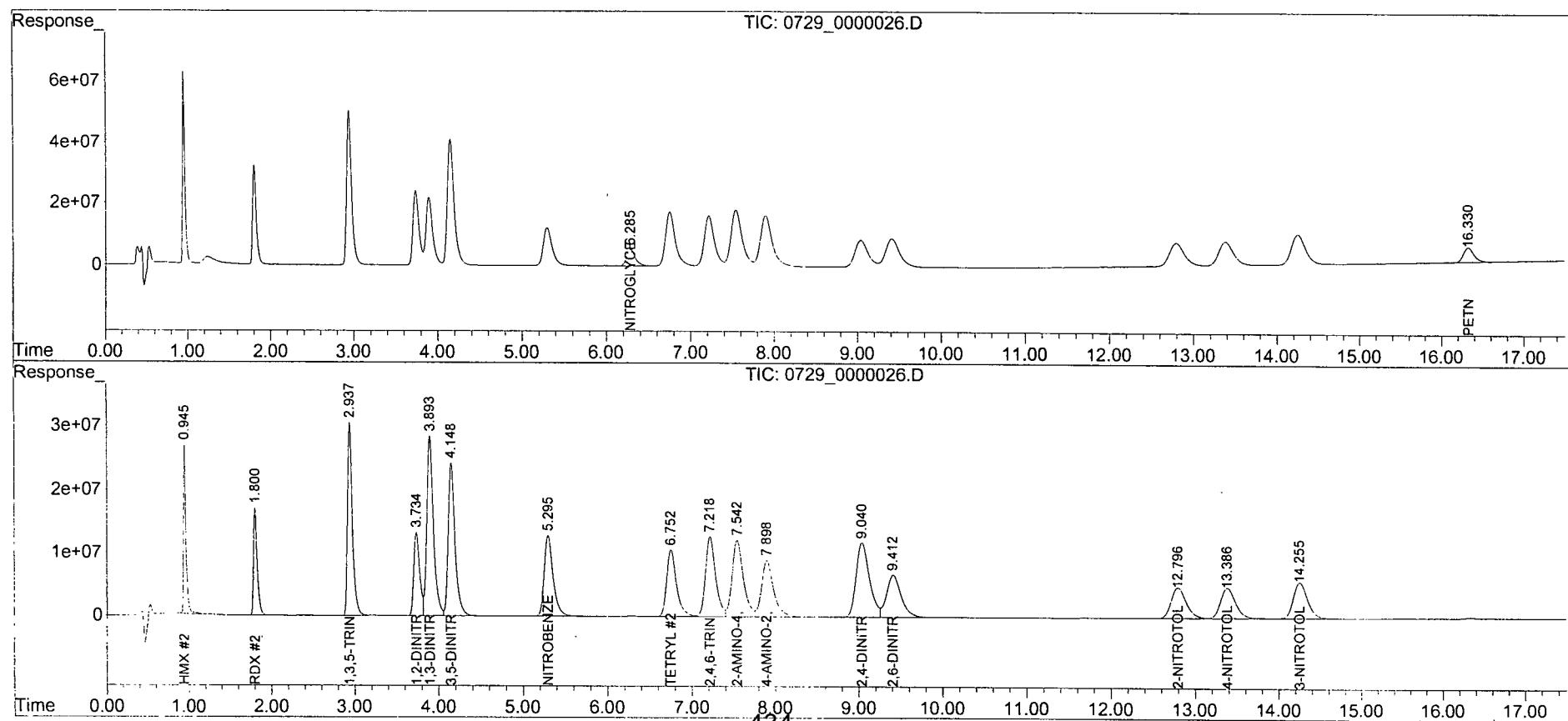
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000026.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 22:43:36
Operator : MP
Sample : 8330_CB 1.0PPM 07/29/15
Misc :
ALS Vial : 8391 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:48:31 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sun Jun 28 06:23:43 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 1.00x3.0mm 1.8-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000027.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 23:11:07
 Operator : MP
 Sample : 8330MXA_CB 2.0 PPM 07/29/15
 Misc :
 ALS Vial : 8392 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:49:09 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>							
4)	S 1,2-DINIT...	0.000	3.735	0 26792679	N.D.	1873.631	#
	Spiked Amount	62.500		Recovery	=	0.00%	2997.81%
<hr/>							
System Monitoring Compounds							
1)	TM HMX	0.000	0.946	0 52070841	N.D.	1866.812	#
2)	TM RDX	0.000	1.801	0 33997114	N.D.	1872.445	#
3)	TM 1,3,5-TRI...	0.000	2.938	0 60981333	N.D.	1855.766	#
5)	TM 1,3-DINIT...	0.000	3.894	0 57391815	N.D.	1886.710	#
6)	TM 3,5-DINIT...	0.000	0.000	0 0	N.D.	N.D.	
7)	TM NITROBENZENE	0.000	5.292	0 25830336	N.D.	1857.409	#
8)	TM NITROGLYC...	0.000	0.000	0 0	N.D. d	N.D. d	
9)	TM TETRYL	6.752	6.752	35083684 21329324	NoCal	1920.298	#
10)	TM 2,4,6-TRI...	7.219	7.219	32729354 25545019	NoCal	1820.121	#
11)	TM 2-AMINO-4...	7.545	7.545	36466917 24389390	NoCal	1811.591	#
12)	TM 4-AMINO-2...	7.904	7.904	32957136 17790817	NoCal	1783.057	#
13)	TM 2,4-DINIT...	9.042	9.042	17548711 23987823	NoCal	1839.206	#
14)	TM 2,6-DINIT...	9.416	9.415	18589351 13479340	NoCal	1828.275	#
15)	TM 2-NITROTO...	0.000	12.792	0 9654991	N.D.	1815.566	#
16)	TM 4-NITROTO...	0.000	13.380	0 9578780	N.D.	1833.247	#
17)	TM 3-NITROTO...	0.000	14.252	0 11476220	N.D.	1847.653	#
18)	TM PETN	0.000	0.000	0 0	N.D.	N.D.	
<hr/>							

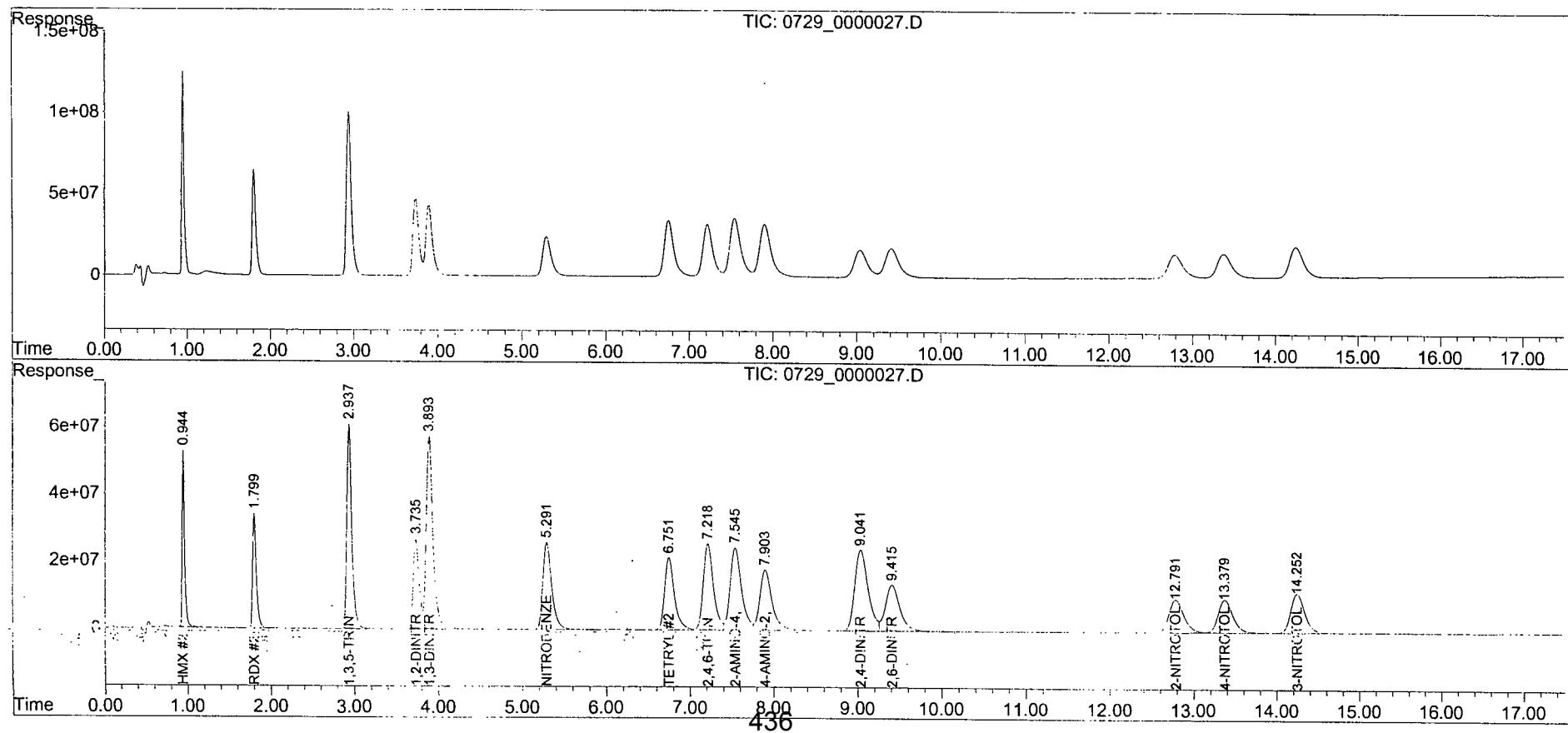
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000027.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 23:11:07
Operator : MP
Sample : 8330MXA_CB 2.0 PPM 07/29/15
Misc :
ALS Vial : 8392 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:49:09 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sun Jun 28 06:23:43 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000028.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 29-Jul-2015, 23:38:37
 Operator : MP
 Sample : 8330MXB_CB 2.0 PPM 07/29/15
 Misc :
 ALS Vial : 8448 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 11:48:48 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Sun Jun 28 06:23:43 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>							
4)	S 1,2-DINIT...	0.000	0.000	0	0	N.D.	N.D.
System Monitoring Compounds							
Spiked Amount	62.500			Recovery	=	0.00%	0.00%
<hr/>							
1)	TM HMX	0.000	0.000	0	0	N.D.	N.D.
2)	TM RDX	0.000	0.000	0	0	N.D.	N.D.
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6)	TM 3,5-DINIT...	0.000	4.147	0	48900357	N.D.	1861.830 #
7)	TM NITROBENZENE	0.000	0.000	0	0	N.D. d	N.D. d
8)	TM NITROGLYC...	6.282	6.282	10621280	201935	1763.655	NoCal #
9)	TM TETRYL	6.803	0.000	4960	0	NoCal	N.D.
10)	TM 2,4,6-TRI...	7.239	0.000	55521	0	NoCal	N.D.
11)	TM 2-AMINO-4...	7.603	0.000	8539	0	NoCal	N.D.
12)	TM 4-AMINO-2...	7.901	0.000	8229	0	NoCal	N.D.
13)	TM 2,4-DINIT...	9.054	0.000	8637	0	NoCal	N.D.
14)	TM 2,6-DINIT...	9.419	0.000	13911	0	NoCal	N.D.
15)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16)	TM 4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
17)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
18)	TM PETN	16.325	0.000	9411709	0	1856.481	N.D. #
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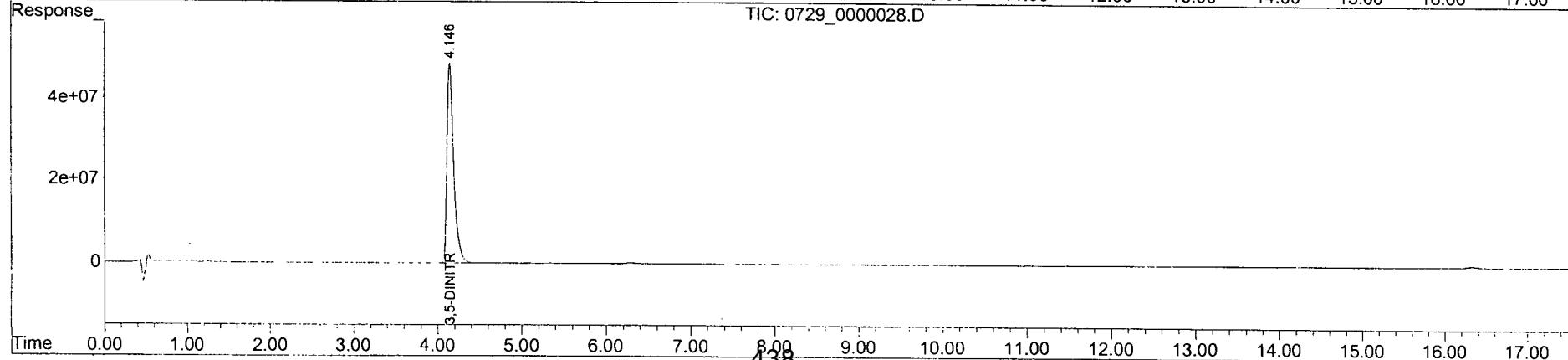
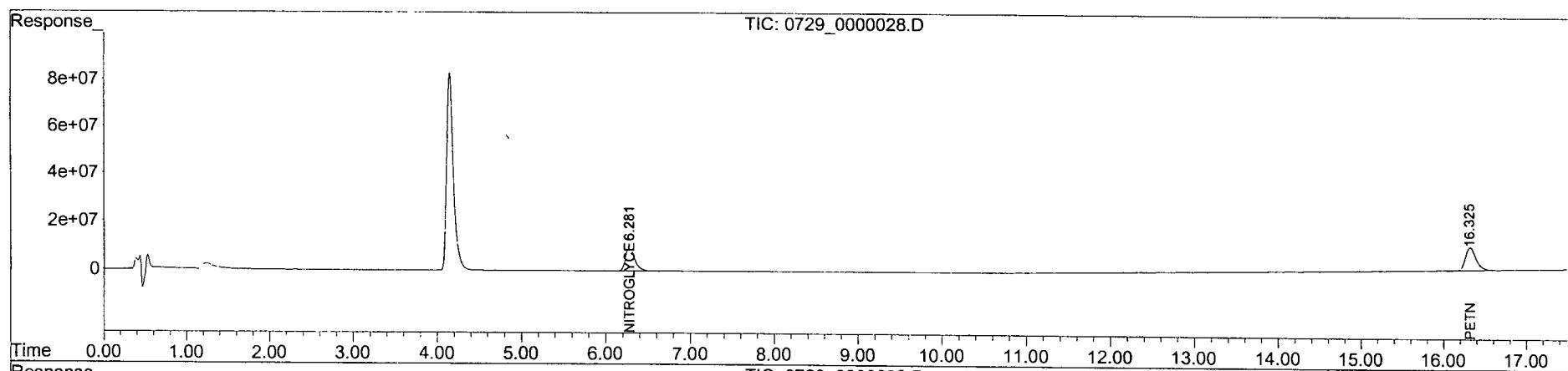
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000028.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 29-Jul-2015, 23:38:37
Operator : MP
Sample : 8330MXB_CB 2.0 PPM 07/29/15
Misc :
ALS Vial : 8448 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 11:48:48 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Sun Jun 28 06:23:43 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Second Source Calibration

Lab Name: APPL, inc.

SDG No:

Case No:

Date Analyzed: 30-Jul-2015, 01:28:08

Matrix:

Instrument: Waldorf

Initial Cal. Date: 07/29/15

Data File: 0729_0000032-033.D

		Compound	MEAN	CCRF	%D	%Drift
1	TM	NITROGLYCERIN	133	131	1.8	TM
2	TM	PETN	116	110	5.3	TM
3		Signal #2				
4	TM	HMX	668	666	0.29	TM
5	TM	RDX	424	432	1.9	TM
6	TM	1,3,5-TRINITROBENZENE	756	702	7.1	TM
7	S	1,2-DINITROBENZENE	326	343	5.2	S
8	TM	1,3-DINITROBENZENE	699	713	2.0	TM
9	TM	3,5-DINITROANILINE	599	622	3.9	TM
10	TM	NITROBENZENE	315	318	0.70	TM
11	TM	2,4,6-TRINITROTOLUENE	314	323	3.0	TM
12	TM	2-AMINO-4,6-DINITROTOLUEN	299	289	3.5	TM
13	TM	4-AMINO-2,6-DINITROTOLUEN	221	242	9.3	TM
14	TM	2,4-DINITROTOLUENE	291	311	6.9	TM
15	TM	2,6-DINITROTOLUENE	164	175	6.7	TM
16	TM	2-NITROTOLUENE	119	127	6.3	TM
17	TM	4-NITROTOLUENE	116	122	5.0	TM
18	TM	3-NITROTOLUENE	140	147	5.2	TM
19	TM	TETRYL	263	269	2.1	TM
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Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CH32\2\DATA\150729\150729\
 Data File : 0729_0000032.D
 Signal(s) : Signal #1: C:\D1B.ch Signal #2: DAD1A.ch
 Acq On : 30-Jul-2015, 01:28:38
 Operator : MP
 Sample : 8330_SS 1.0 ppm 07/29/15
 Misc :
 ALS Vial : 8449 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 16:26:55 2015
 Quant Method : Z:\WALDORF\CH32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - SciL - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 1.8x3.0mm 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppm
<hr/>						
System Monitoring Compounds						
4) S 1,2-DINIT... 0.000	3.725	0	13737444	N.D.	1052.70	#
Spiked Amount 62.500			Recovery =	0.00%	1683.95	%
<hr/>						
Target Compounds						
1) TM HMX 0.000	0.945	0	26630003	N.D.	997.51	#
2) TM RDX 0.000	1.797	0	17273358	N.D.	1019.71	#
3) TM 1,3,5-TRI... 0.000	2.929	0	28076241	N.D.	928.80	#
5) TM 1,3-DINIT... 0.000	3.884	0	28523433	N.D.	1020.18	#
6) TM 3,5-DINIT... 0.000	4.138	0	24884931	N.D.	1039.21	#
7) TM NITROBENZENE 0.000	5.282	0	12705274	N.D.	1006.96	#
8) TM NITROGLYC... 6.255	6.264	5234904	104185	982.395	NoCal	#
9) TM TETRYL 0.000	0.000	0	0	N.D. d	N.D. d	
10) TM 2,4,6-TRI... 7.194	7.193	16648051	12931569	NoCal	1030.458	#
11) TM 2-AMINO-4... 7.521	7.521	17299691	11548969	NoCal	964.635	#
12) TM 4-AMINO-2... 7.877	7.877	17891040	9681836	NoCal	1093.026	#
13) TM 2,4-DINIT... 9.013	9.014	9069755	12426602	NoCal	1068.976	#
14) TM 2,6-DINIT... 9.386	9.385	9640079	7000333	NoCal	1067.034	#
15) TM 2-NITROTO... 0.000	12.770	0	5074294	N.D.	1063.452	#
16) TM 4-NITROTO... 0.000	13.359	0	4863172	N.D.	1050.138	#
17) TM 3-NITROTO... 0.000	14.232	0	5875106	N.D.	1051.355	#
18) TM PETN 0.000	0.000	0	0	N.D.	N.D.	
<hr/>						

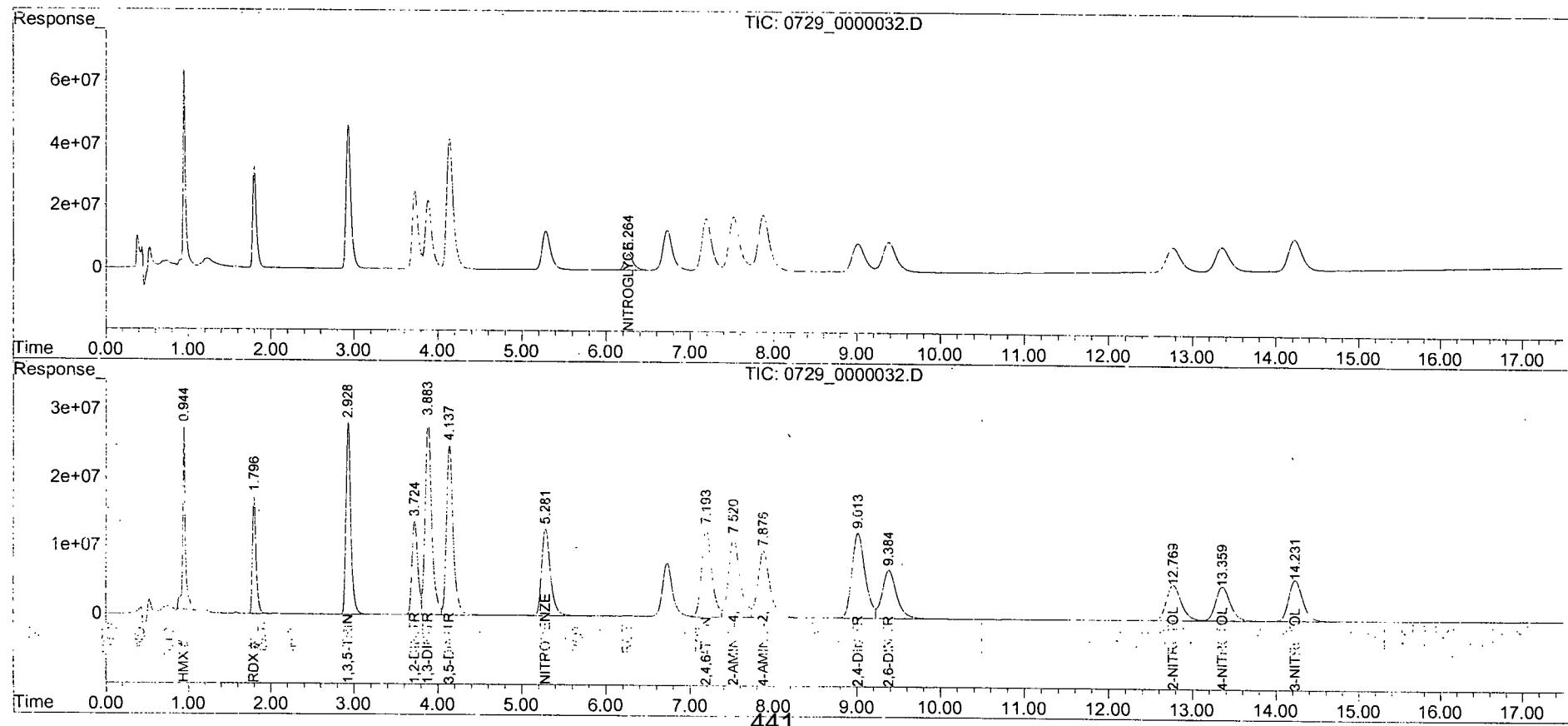
(f)=RT Delta > 1/2 Window (m)=Amounts differ by > 25% (n)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000032.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 30-Jul-2015, 01:28:38
Operator : MP
Sample : 8330_SS 1.0 PPM 07/29/15
Misc :
ALS Vial : 8449 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 16:26:55 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integration: ChenzSation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
 Data File : 0729_0000033.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 30-Jul-2015, 01:56:09
 Operator : MP
 Sample : PETN_TETRYL_SS 1.0 PPM 07/29/15
 Misc :
 ALS Vial : 8450 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Jul 30 16:28:44 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
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System Monitoring Compounds

4) S 1,2-DINIT...	0.000	0.000	0	0	N.D.	N.D.
Spiked Amount	62.500		Recovery	=	0.00%	0.00%

Target Compounds

1) TM HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM RDX	0.000	0.000	0	0	N.D.	N.D.
3) TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.	N.D.
5) TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6) TM 3,5-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
7) TM NITROBENZENE	0.000	0.000	0	0	N.D.	N.D.
8) TM NITROGLYC...	0.000	0.000	0	0	N.D. d	N.D. d
9) TM TETRYL	6.732	6.732	17654202 10745524	NoCal	1021.370 #	
10) TM 2,4,6-TRI...	0.000	0.000	0	0	N.D. d	N.D. d
11) TM 2-AMINO-4...	7.570	0.000	15770	0	NoCal	N.D.
12) TM 4-AMINO-2...	7.833	0.000	3100	0	NoCal	N.D.
13) TM 2,4-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
14) TM 2,6-DINIT...	0.000	0.000	0	0	N.D. d	N.D. d
15) TM 2-NITROTO...	0.000	0.000	0	0	N.D. d	N.D. d
16) TM 4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
17) TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
18) TM PETN	16.306	0.000	4382866	0	947.405	N.D. #

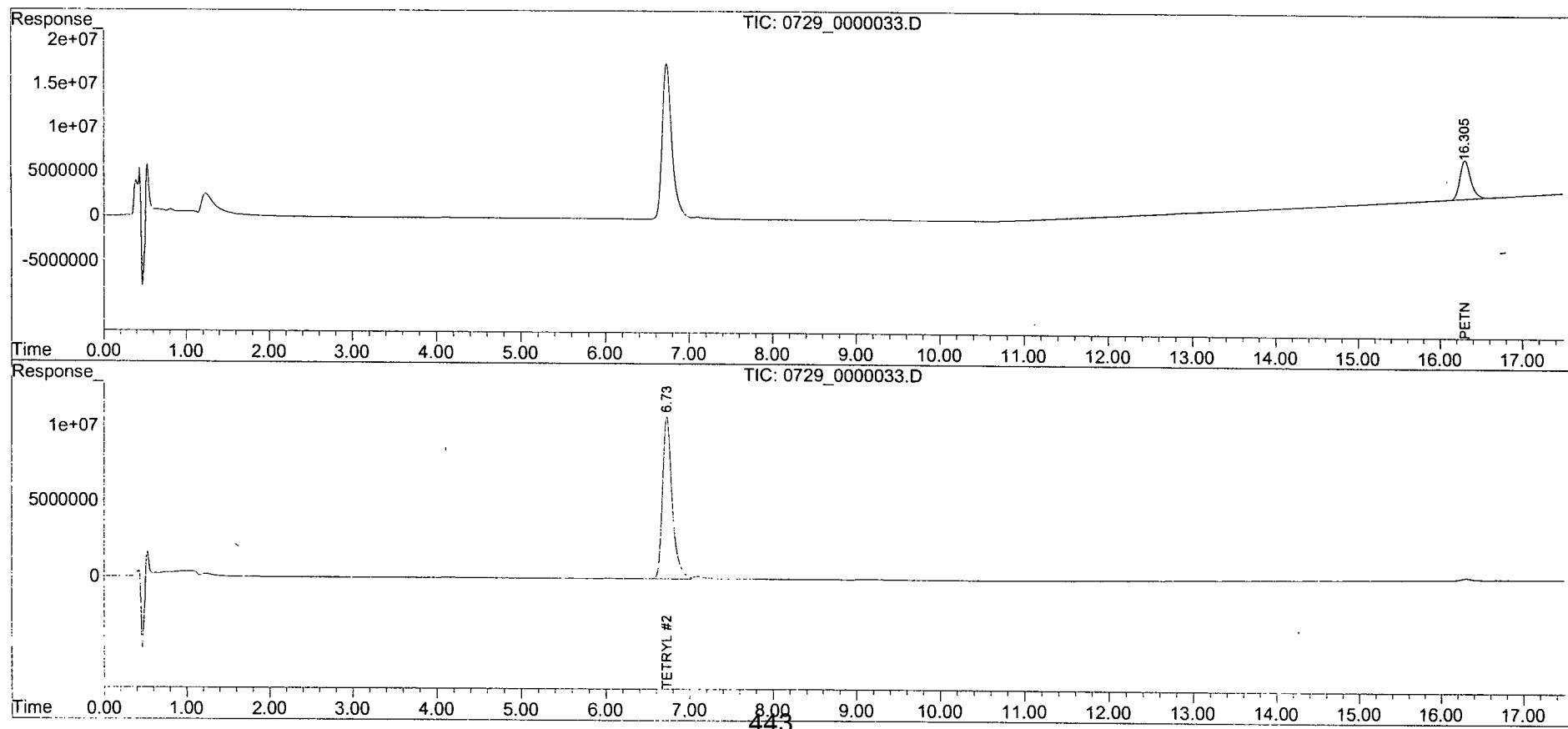
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\150729\
Data File : 0729_0000033.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 30-Jul-2015, 01:56:09
Operator : MP
Sample : PETN_TETRYL_SS 1.0 PPM 07/29/15
Misc :
ALS Vial : 8450 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Jul 30 16:28:44 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\150729\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Form 7
Continuing Calibration

Lab Name: APPL, Inc.

SDG No:

Case No: _____

Date Analyzed: 20-Nov-2015, 15:46:10

Matrix: _____

Instrument: Waldorf

Initial Cal. Date: 07/29/15

Data File: 1117_000134.D

		Compound	MEAN	CCRF	%D	%Drift
1	TM	NITROGLYCERIN	133	125	6.1	TM
2	TM	PETN	116	110	5.2	TM
3		Signal #2				
4	TM	HMX	668	656	1.8	TM
5	TM	RDX	424	420	0.88	TM
6	TM	1,3,5-TRINITROBENZENE	756	743	1.7	TM
7	S	1,2-DINITROBENZENE	326	318	2.5	S
8	TM	1,3-DINITROBENZENE	699	687	1.7	TM
9	TM	3,5-DINITROANILINE	599	582	2.9	TM
10	TM	NITROBENZENE	315	316	0.12	TM
11	TM	TETRYL	263	255	3.2	TM
12	TM	2,4,6-TRINITROTOLUENE	314	303	3.3	TM
13	TM	2-AMINO-4,6-DINITROTOLUEN	299	289	3.4	TM
14	TM	4-AMINO-2,6-DINITROTOLUEN	221	212	4.2	TM
15	TM	2,4-DINITROTOLUENE	291	283	2.5	TM
16	TM	2,6-DINITROTOLUENE	164	161	2.1	TM
17	TM	2-NITROTOLUENE	119	115	3.2	TM
18	TM	4-NITROTOLUENE	116	113	2.1	TM
19	TM	3-NITROTOLUENE	140	136	2.4	TM
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Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000134.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 20-Nov-2015, 15:46:10
 Operator : MP
 Sample : 8330_CCV 1.0 PPM 11/20/15
 Misc :
 ALS Vial : 4424 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 20 16:42:57 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
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System Monitoring Compounds
 4) S 1,2-DINIT... 0.000 3.716 0 12730970 N.D. 975.361 #
 Spiked Amount 62.500 Recovery = 0.00% 1560.58%

Target Compounds

1) TM HMX	0.000	0.944	0	26235579	N.D.	982.283	#
2) TM RDX	0.000	1.793	0	16794020	N.D.	991.171	#
3) TM 1,3,5-TRI...	0.000	2.928	0	29724007	N.D.	983.395	#
5) TM 1,3-DINIT...	0.000	3.877	0	27480333	N.D.	983.072	#
6) TM 3,5-DINIT...	0.000	4.125	0	23260939	N.D.	971.394	#
7) TM NITROBENZENE	0.000	5.264	0	12632182	N.D.	1001.169	#
8) TM NITROGLYC...	6.261	6.260	5005832	99500	939.407	NoCal	#
9) TM TETRYL	6.708	6.708	16701946	10183215	NoCal	967.922	#
10) TM 2,4,6-TRI...	7.179	7.179	15485524	12134581	NoCal	966.949	#
11) TM 2-AMINO-4...	7.487	7.487	17274026	11565030	NoCal	966.177	#
12) TM 4-AMINO-2...	7.837	7.837	15670901	8483622	NoCal	957.754	#
13) TM 2,4-DINIT...	8.984	8.984	8231808	11334424	NoCal	975.023	#
14) TM 2,6-DINIT...	9.349	9.348	87777154	6425425	NoCal	979.458	#
15) TM 2-NITROTO...	0.000	12.720	0	4617235	N.D.	967.672	#
16) TM 4-NITROTO...	0.000	13.312	0	4535566	N.D.	979.396	#
17) TM 3-NITROTO...	0.000	14.185	0	5451047	N.D.	976.035	#
18) TM PETN	16.300	0.000	4385374	0	947.947	N.D.	#

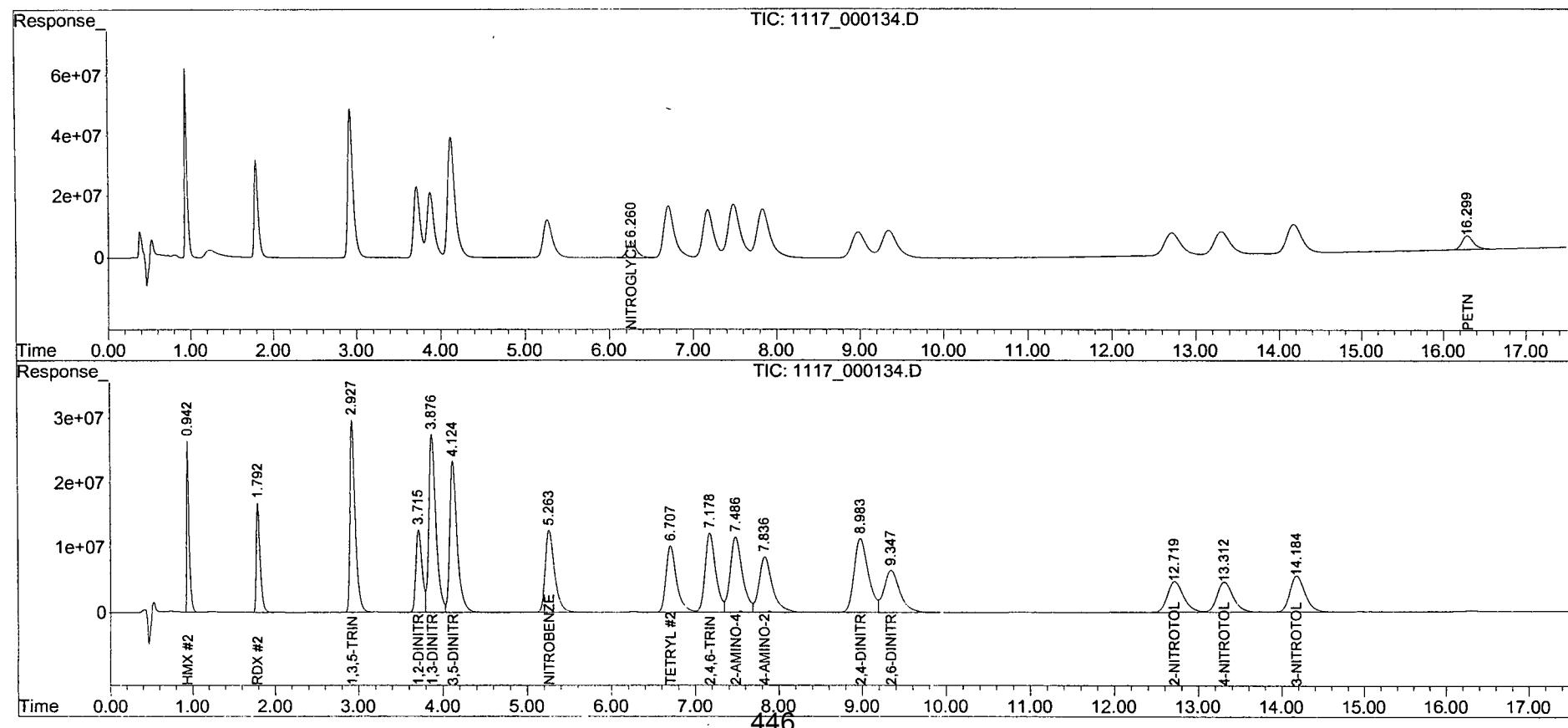
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
Data File : 1117_000134.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 20-Nov-2015, 15:46:10
Operator : MP
Sample : 8330_CCV 1.0 PPM 11/20/15
Misc :
ALS Vial : 4424 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Nov 20 16:42:57 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Form 7
Continuing Calibration

Lab Name: APPL, Inc.
 Case No: _____
 Matrix: _____

SDG No: _____
 Date Analyzed: 21-Nov-2015, 00:58:50
 Instrument: Waldorf
 Initial Cal. Date: 07/29/15
 Data File: 1117_000149.D

		Compound	MEAN	CCRF	%D	%Drift
1	TM	NITROGLYCERIN	133	124	6.7	TM
2	TM	PETN	116	110	5.1	TM
3		Signal #2				
4	TM	HMX	668	654	2.0	TM
5	TM	RDX	424	416	1.7	TM
6	TM	1,3,5-TRINITROBENZENE	756	739	2.2	TM
7	S	1,2-DINITROBENZENE	326	317	3.0	S
8	TM	1,3-DINITROBENZENE	699	684	2.1	TM
9	TM	3,5-DINITROANILINE	599	576	3.7	TM
10	TM	NITROBENZENE	315	309	2.0	TM
11	TM	TETRYL	263	252	4.1	TM
12	TM	2,4,6-TRINITROTOLUENE	314	302	3.7	TM
13	TM	2-AMINO-4,6-DINITROTOLUEN	299	286	4.5	TM
14	TM	4-AMINO-2,6-DINITROTOLUEN	221	210	5.1	TM
15	TM	2,4-DINITROTOLUENE	291	282	2.8	TM
16	TM	2,6-DINITROTOLUENE	164	160	2.4	TM
17	TM	2-NITROTOLUENE	119	113	5.5	TM
18	TM	4-NITROTOLUENE	116	112	3.5	TM
19	TM	3-NITROTOLUENE	140	134	4.0	TM
20						
21						
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Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000149.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 21-Nov-2015, 00:58:50
 Operator : MP
 Sample : 8330_CCV 1.0 PPM 11/20/15
 Misc :
 ALS Vial : 4424 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 21 10:01:45 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	3.729	0 12665227	N.D.	970.324	#
Spiked Amount	62.500		Recovery	=	0.00%	1552.52%
<hr/>						
Target Compounds						
1) TM HMX	0.000	0.945	0 26166640	N.D.	979.702	#
2) TM RDX	0.000	1.800	0 16651317	N.D.	982.748	#
3) TM 1,3,5-TRI...	0.000	2.934	0 29561705	N.D.	978.025	#
5) TM 1,3-DINIT...	0.000	3.888	0 27355372	N.D.	978.602	#
6) TM 3,5-DINIT...	0.000	4.147	0 23054735	N.D.	962.783	#
7) TM NITROBENZENE	0.000	5.279	0 12369209	N.D.	980.326	#
8) TM NITROGLYC...	6.269	6.270	4971075 100394	932.885	NoCal	#
9) TM TETRYL	6.737	6.737	16551859 10091496	NoCal	959.204	#
10) TM 2,4,6-TRI...	7.199	7.199	15408095 12087268	NoCal	963.179	#
11) TM 2-AMINO-4...	7.534	7.534	17092176 11425306	NoCal	954.504	#
12) TM 4-AMINO-2...	7.885	7.885	15561655 8405656	NoCal	948.953	#
13) TM 2,4-DINIT...	9.019	9.019	8179705 11296492	NoCal	971.760	#
14) TM 2,6-DINIT...	9.386	9.385	8721526 6404336	NoCal	976.243	#
15) TM 2-NITROTO...	0.000	12.755	0 4508628	N.D.	944.911	#
16) TM 4-NITROTO...	0.000	13.347	0 4469256	N.D.	965.077	#
17) TM 3-NITROTO...	0.000	14.216	0 5363216	N.D.	960.309	#
18) TM PETN	16.300	0.000	4389434	0	948.825	N.D.
<hr/>						

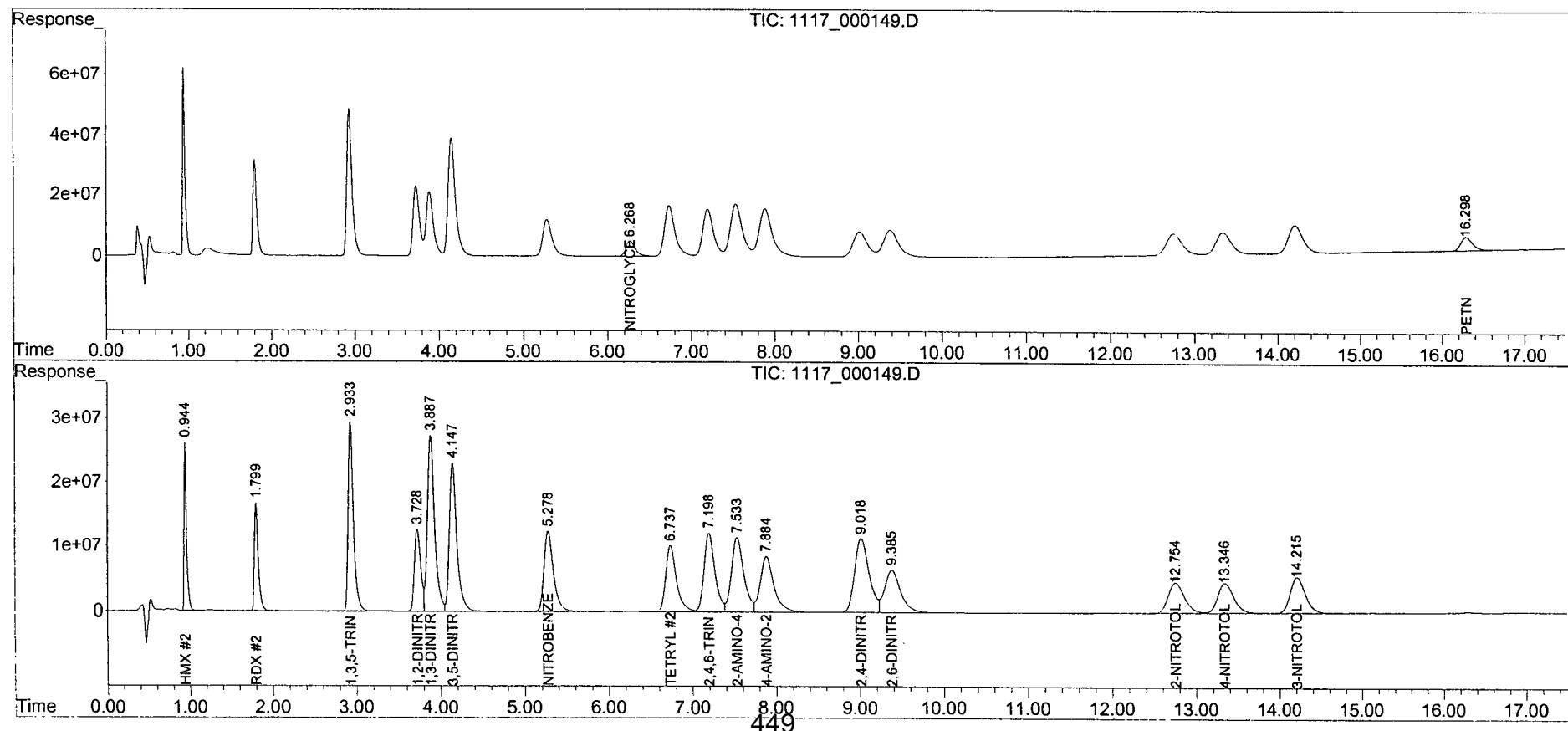
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
Data File : 1117_000149.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 21-Nov-2015, 00:58:50
Operator : MP
Sample : 8330_CCV 1.0 PPM 11/20/15
Misc :
ALS Vial : 4424 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Nov 21 10:01:45 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Form 7
Continuing Calibration

Lab Name: APPL, Inc.

Case No:

Matrix:

SDG No:

Date Analyzed: 21-Nov-2015, 09:33:57

Instrument: Waldorf

Initial Cal. Date: 07/29/15

Data File: 1117_000163.D

		Compound	MEAN	CCRF	%D	%Drift
1	TM	NITROGLYCERIN	133	129	3.3	TM
2	TM	PETN	116	113	2.3	TM
3		Signal #2				
4	TM	HMX	668	664	0.61	TM
5	TM	RDX	424	428	0.93	TM
6	TM	1,3,5-TRINITROBENZENE	756	761	0.74	TM
7	S	1,2-DINITROBENZENE	326	328	0.57	S
8	TM	1,3-DINITROBENZENE	699	706	1.1	TM
9	TM	3,5-DINITROANILINE	599	601	0.33	TM
10	TM	NITROBENZENE	315	313	0.78	TM
11	TM	TETRYL	263	264	0.42	TM
12	TM	2,4,6-TRINITROTOLUENE	314	314	0.16	TM
13	TM	2-AMINO-4,6-DINITROTOLUEN	299	301	0.42	TM
14	TM	4-AMINO-2,6-DINITROTOLUEN	221	221	0.38	TM
15	TM	2,4-DINITROTOLUENE	291	294	1.1	TM
16	TM	2,6-DINITROTOLUENE	164	166	1.5	TM
17	TM	2-NITROTOLUENE	119	114	4.3	TM
18	TM	4-NITROTOLUENE	116	114	1.5	TM
19	TM	3-NITROTOLUENE	140	136	2.6	TM
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Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000163.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 21-Nov-2015, 09:33:57
 Operator : MP
 Sample : 8330_CCV 1.0 PPM 11/20/15
 Misc :
 ALS Vial : 4424 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 21 10:03:08 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
----------	------	------	--------	--------	-----	-----

System Monitoring Compounds
 4) S 1,2-DINIT... 0.000 3.716 0 13127451 N.D. 1005.736 #
 Spiked Amount 62.500 Recovery = 0.00% 1609.18%

Target Compounds

1)	TM HMX	0.000	0.943	0	26545552	N.D.	993.889	#
2)	TM RDX	0.000	1.794	0	17101026	N.D.	1009.290	#
3)	TM 1,3,5-TRI...	0.000	2.928	0	30449088	N.D.	1007.383	#
5)	TM 1,3-DINIT...	0.000	3.877	0	28249672	N.D.	1010.594	#
6)	TM 3,5-DINIT...	0.000	4.129	0	24025701	N.D.	1003.331	#
7)	TM NITROBENZENE	0.000	5.263	0	12518936	N.D.	992.193	#
8)	TM NITROGLYC...	6.256	6.256	5150622	94676	966.579	NoCal	#
9)	TM TETRYL	6.710	6.710	17330564	10565124	NoCal	1004.222	#
10)	TM 2,4,6-TRI...	7.178	7.178	16022389	12568894	NoCal	1001.558	#
11)	TM 2-AMINO-4...	7.495	7.495	17972830	12020044	NoCal	1004.190	#
12)	TM 4-AMINO-2...	7.844	7.844	16333068	8823992	NoCal	996.180	#
13)	TM 2,4-DINIT...	8.986	8.986	8530842	11757430	NoCal	1011.412	#
14)	TM 2,6-DINIT...	9.350	9.350	9084194	6657179	NoCal	1014.785	#
15)	TM 2-NITROTO...	0.000	12.714	0	4566457	N.D.	957.030	#
16)	TM 4-NITROTO...	0.000	13.305	0	4560566	N.D.	984.794	#
17)	TM 3-NITROTO...	0.000	14.173	0	5439762	N.D.	974.015	#
18)	TM PETN	16.275	0.000	4519438	0	976.927	N.D.	#

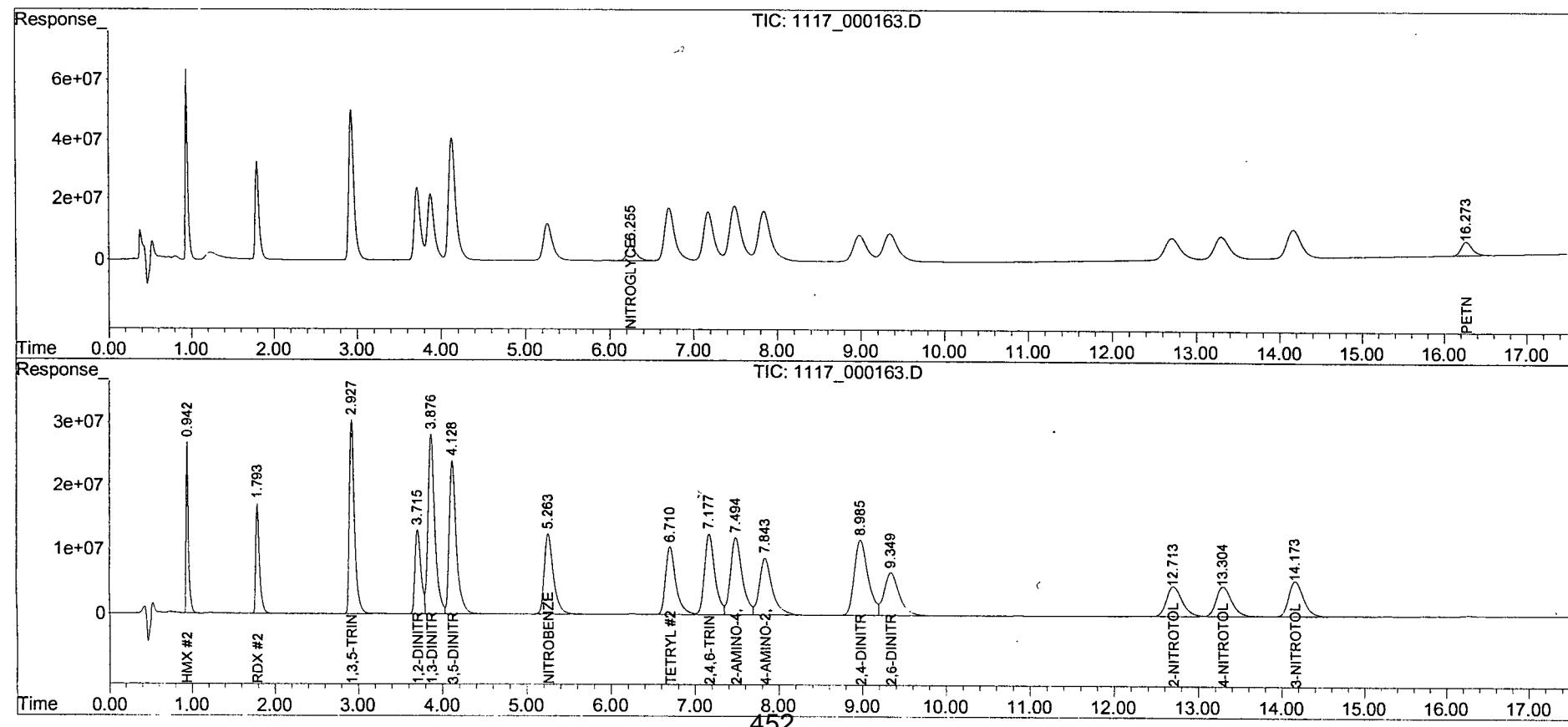
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
Data File : 1117_000163.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 21-Nov-2015, 09:33:57
Operator : MP
Sample : 8330_CCV 1.0 PPM 11/20/15
Misc :
ALS Vial : 4424 Sample Multiplier: 1

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Nov 21 10:03:08 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



**EPA 8330
EXPLOSIVES**

Raw Data

APPL, INC.

Method Blank
EPA 8330B SOIL

Blank Name/QCG: **151118S-24401 - 202617**
 Batch ID: #83BJU-151118A

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2,4-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
BLANK	2,6-DINITROTOLUENE	0.200 U	0.50	0.200	0.083	mg/kg	11/18/15	11/20/15
BLANK	HMX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
BLANK	NITROGLYCERIN	0.200 U	0.50	0.200	0.085	mg/kg	11/18/15	11/20/15
BLANK	RDX	0.200 U	0.50	0.200	0.080	mg/kg	11/18/15	11/20/15
BLANK	TETRYL	0.200 U	0.50	0.200	0.091	mg/kg	11/18/15	11/20/15
BLANK	SURROGATE: 1,2-DINITROBENZ	92.9	70-130			%	11/18/15	11/20/15

Quant Method: W150729.M
Run #: 1117_000142
Instrument: Waldorf
Sequence: 151117
Matrix: MP
GC GC-Blank-REG MDLs-ODD
Printed: 11/27/15 2:07:35 PM

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000142.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 20-Nov-2015, 20:36:16
 Operator : MP
 Sample : 151118ABLK 7.890 DF 11/18/15
 Misc : Soil
 ALS Vial : 4293 Sample Multiplier: 7.88955

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 21 12:00:46 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>						
System Monitoring Compounds						
4) S 1,2-DINIT...	0.000	3.722	0	908920	N.D.	549.391 #
Spiked Amount	591.716		Recovery	=	0.00%	92.85%
<hr/>						
Target Compounds						
1) TM HMX	0.000	0.000	0	0	N.D.	N.D.
2) TM RDX	0.000	0.000	0	0	N.D.	N.D.
3) TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.	N.D.
5) TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	N.D.
6) TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
7) TM NITROBENZENE	0.000	0.000	0	0	N.D.	N.D.
8) TM NITROGLYC...	0.000	0.000	0	0	N.D.	d CDV N.D.
9) TM TETRYL	6.703	0.000	11047	0	NoCal	N.D.
10) TM 2,4,6-TRI...	7.222	0.000	10346	0	NoCal	N.D.
11) TM 2-AMINO-4...	7.530	0.000	7858	0	NoCal	N.D.
12) TM 4-AMINO-2...	7.777	0.000	23761	0	NoCal	N.D.
13) TM 2,4-DINIT...	9.053	0.000	15896	0	NoCal	N.D.
14) TM 2,6-DINIT...	9.378	0.000	12446	0	NoCal	N.D.
15) TM 2-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
16) TM 4-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
17) TM 3-NITROTO...	0.000	0.000	0	0	N.D.	N.D.
18) TM PETN	0.000	0.000	0	0	N.D.	N.D.
<hr/>						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

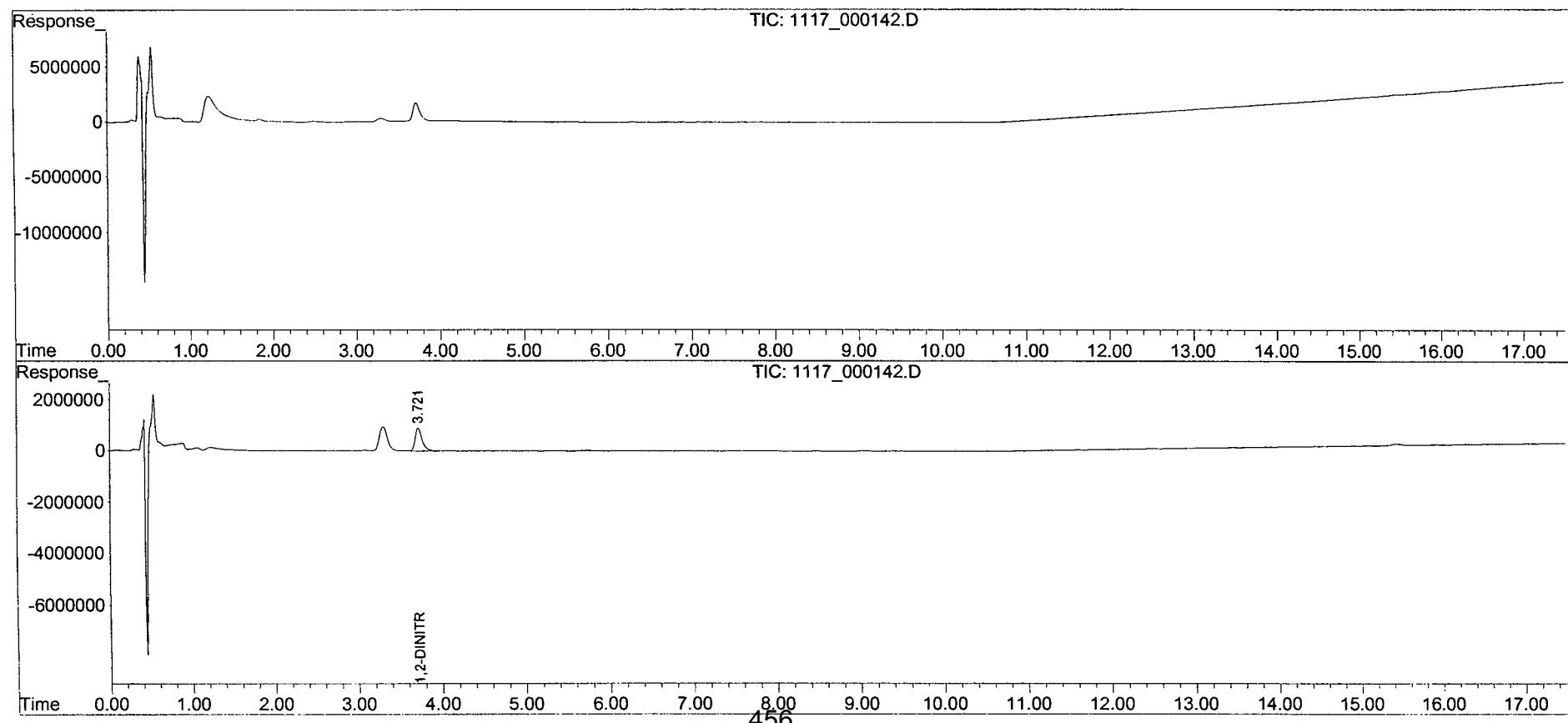
11-27-15

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
Data File : 1117_000142.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 20-Nov-2015, 20:36:16
Operator : MP
Sample : 151118ABLK 7.890 DF 11/18/15
Misc : Soil
ALS Vial : 4293 Sample Multiplier: 7.88955

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Nov 21 12:00:46 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Laboratory Control Spike Recovery
EPA 8330B SOIL

APPL ID: **151118S-24401 LCS - 202617**

Batch ID: #83BJU-151118A

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Level	SPK Result	SPK % Recovery	Recovery Limits
	mg/kg	mg/kg	Recovery	
2,4-DINITROTOLUENE	1.96	1.77	90.3	80-125
2,6-DINITROTOLUENE	1.96	1.80	91.8	80-120
HMX	1.96	1.83	93.4	75-125
NITROGLYCERIN	1.96	1.71	87.2	68-131
RDX	1.96	1.74	88.8	70-135
TETRYL	1.96	1.63	83.2	10-150
SURROGATE: 1,2-DINITROBENZENE (S)	1.96	1.83	93.4	70-130

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	W150729.M
Extraction Date :	11/18/15
Analysis Date :	11/20/15
Instrument :	Waldorf
Run :	1117_000137
Initials :	MP

Printed: 11/27/15 2:07:29 PM

APPL Standard LCS

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000137.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 20-Nov-2015, 17:28:44
 Operator : MP
 Sample : 151118A_LCS-1 7.859 DF 11/18/15
 Misc : Soil
 ALS Vial : 4288 Sample Multiplier: 7.85855

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 21 10:49:45 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>							
System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.722	0	3042454	N.D.	1831.767 #
	Spiked Amount	589.391		Recovery	=	0.00%	310.79%
<hr/>							
Target Compounds							
1)	TM HMX	0.000	0.948	0	6221577	N.D.	1830.582 #
2)	TM RDX	0.000	1.796	0	3757256	N.D.	1742.637 #
3)	TM 1,3,5-TRI...	0.000	2.931	0	6759785	N.D.	1757.502 #
5)	TM 1,3-DINIT...	0.000	3.882	0	6294701	N.D.	1769.624 #
6)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
7)	TM NITROBENZENE	0.000	5.270	0	2832182	N.D.	1763.975 #
8)	TM NITROGLYC...	6.269	6.266	1159339	25685 1709.741	NoCal	#
9)	TM TETRYL	6.720	6.720	3570497	2182519	NoCal	1630.256 #
10)	TM 2,4,6-TRI...	7.188	7.188	3578474	2793548	NoCal	1749.353 #
11)	TM 2-AMINO-4...	7.500	7.500	3956567	2616872	NoCal	1718.047 #
12)	TM 4-AMINO-2...	7.850	7.850	3590118	1926270	NoCal	1708.962 #
13)	TM 2,4-DINIT...	8.996	8.996	1920448	2620819	NoCal	1771.720 #
14)	TM 2,6-DINIT...	9.361	9.359	2062785	1504981	NoCal	1802.840 #
15)	TM 2-NITROTO...	0.000	12.727	0	1069897	N.D.	1762.101 #
16)	TM 4-NITROTO...	0.000	13.320	0	1057117	N.D.	1793.876 #
17)	TM 3-NITROTO...	0.000	14.185	0	1258130	N.D.	1770.327 #
18)	TM PETN	16.288	0.000	1020630	0	1733.757m	N.D. #
<hr/>							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

M
11-27-15

Algorithm dead

2,4-DNT

$$\frac{2620819}{290.6} \times 7.85855 = 1771.84$$

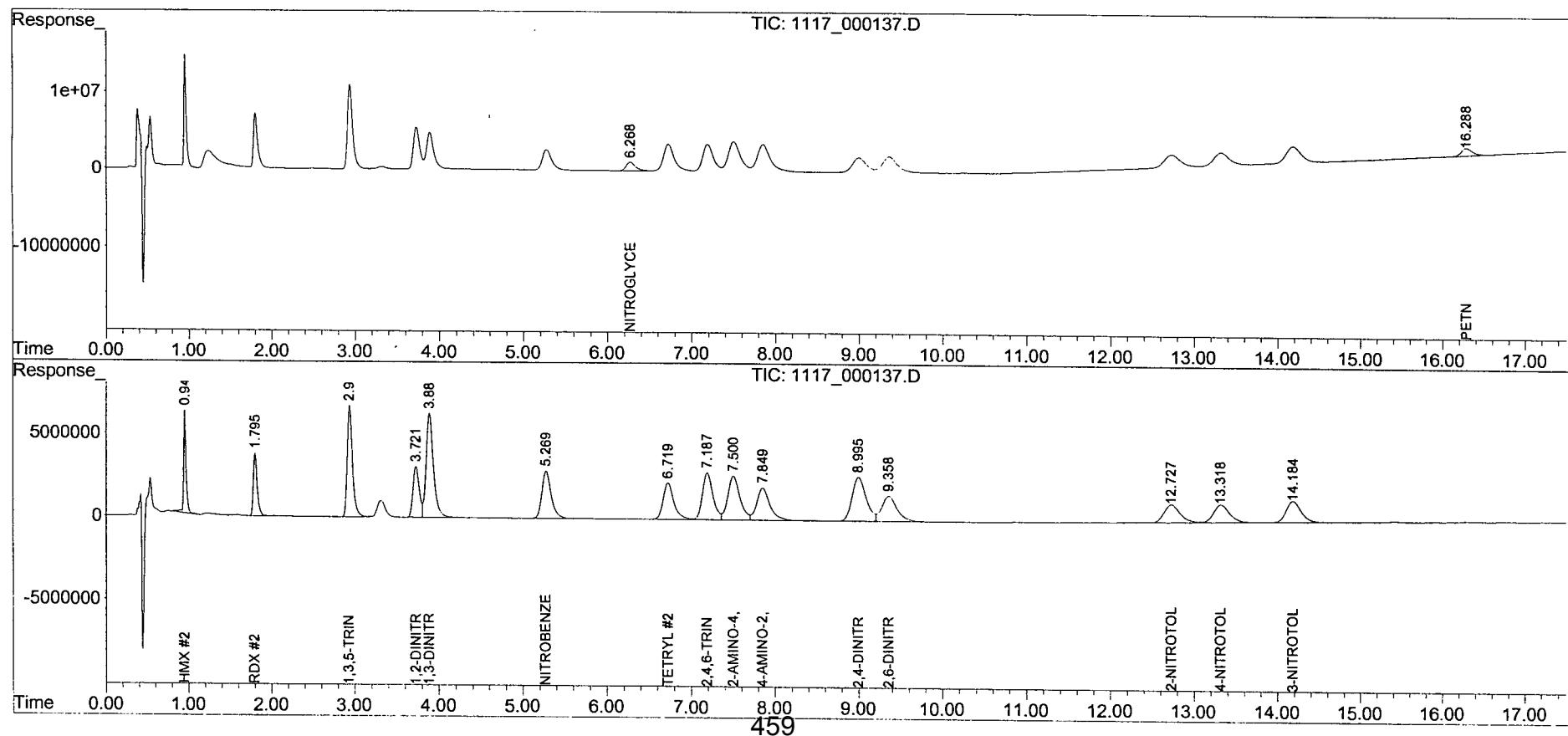
✓ 11-27-15

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
Data File : 1117_000137.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 20-Nov-2015, 17:28:44
Operator : MP
Sample : 151118A_LCS-1 7.859 DF 11/18/15
Misc : Soil
ALS Vial : 4288 Sample Multiplier: 7.85855

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Nov 21 10:49:45 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron

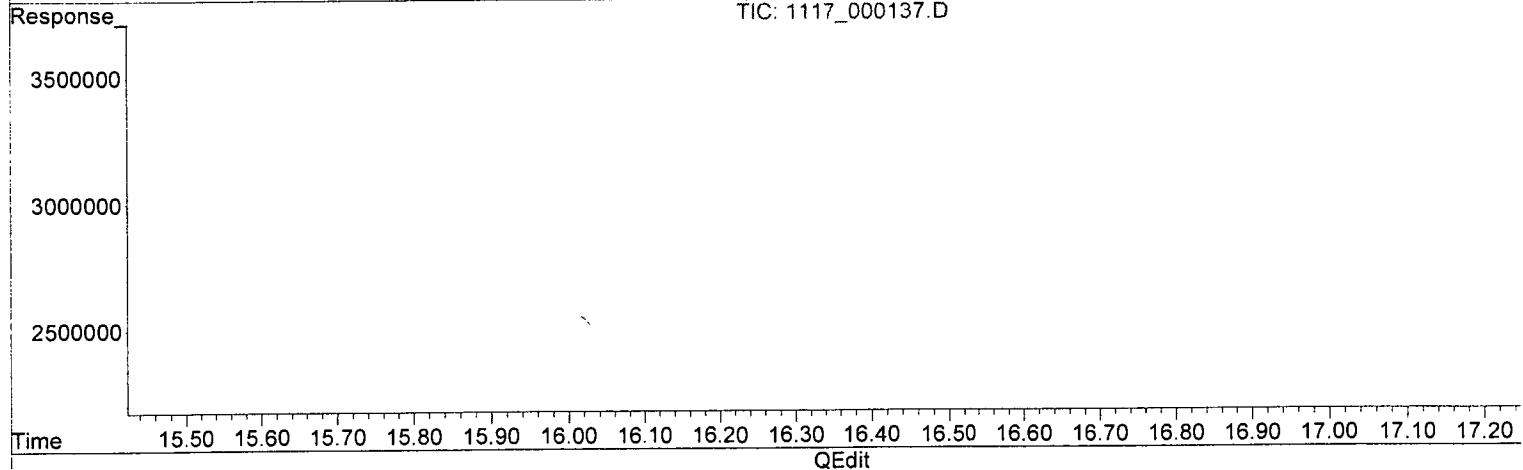
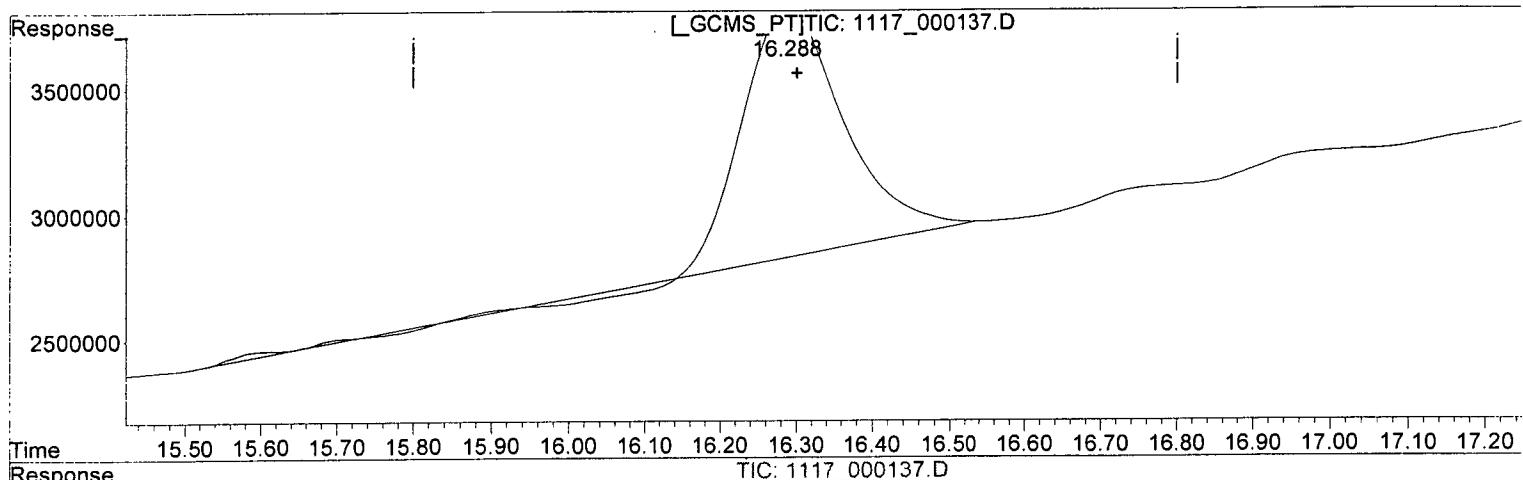


Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000137.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 20-Nov-2015, 17:28:44
 Operator : MP
 Sample : 151118A_LCS-1 7.859 DF 11/18/15
 Misc : Soil
 ALS Vial : 4288 Sample Multiplier: 7.85855

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 21 10:01:09 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0



(18) PETN (TM)
 16.289min 1689.072 ppb
 response 994324

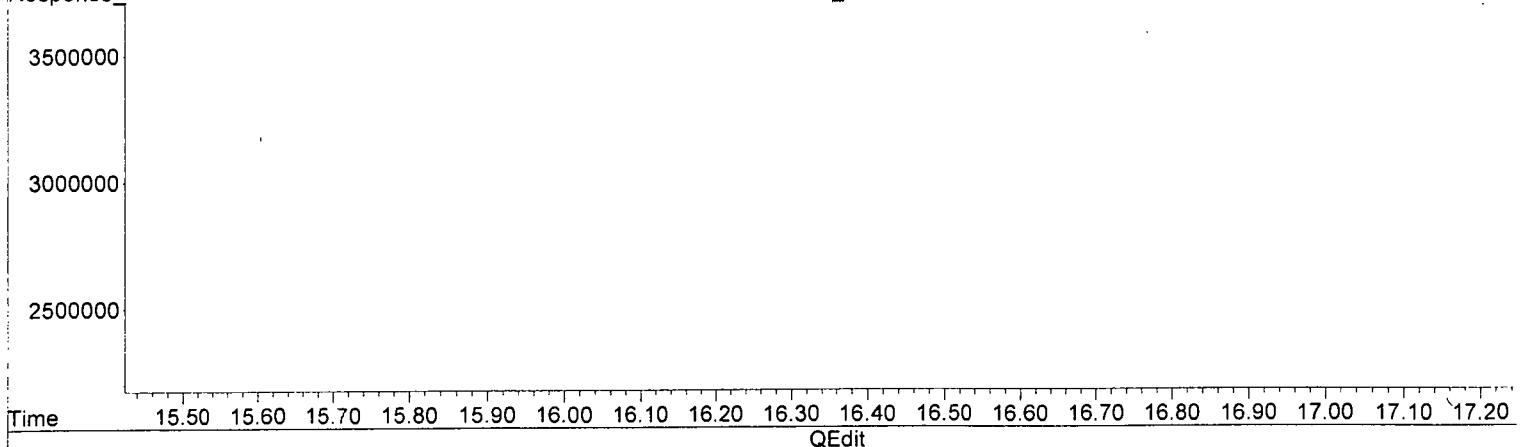
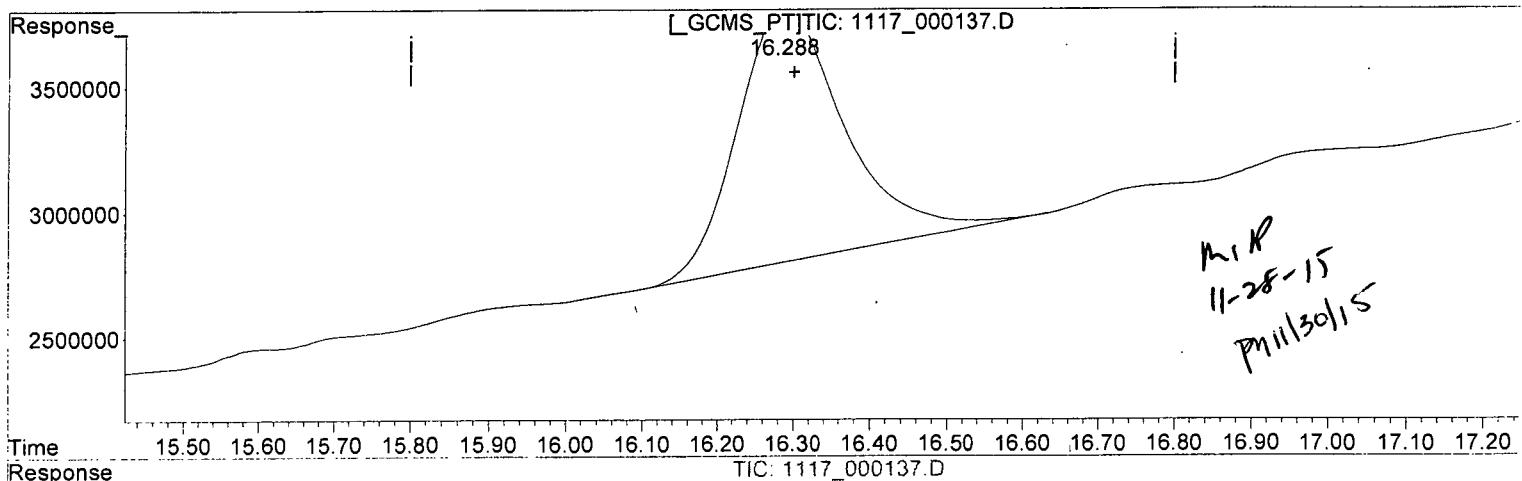
(18) PETN #2 (TM)
 0.000min 0.000 ppb
 response 0

Quantitation Report (Qedit)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000137.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 20-Nov-2015, 17:28:44
 Operator : MP
 Sample : 151118A_LCS-1 7.859 DF 11/18/15
 Misc : Soil
 ALS Vial : 4288 Sample Multiplier: 7.85855

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 21 10:01:09 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0



(18) PETN (TM)

16.288min 1733.757 ppb m

response 1020630

(18) PETN #2 (TM)

0.000min 0.000 ppb

response 0

Matrix Spike Recoveries

EPA 8330B SOIL

APPL ID: **151118S-24401 MS - 202617**

Batch ID: #83BJU-151118A

Sample ID: AZ24401

Client ID: S67-SS53-0006

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	SPK Lvl	DUP Lvl	Matrix	SPK	DUP	SPK %	DUP %	Recovery	RPD	RPD
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	Recovery	Recovery	Limits	%	Limits
2,4-DINITROTOLUENE	1.98	1.97	ND	1.79	1.76	90.4	89.3	80-125	1.2	20
2,6-DINITROTOLUENE	1.98	1.97	ND	1.81	1.79	91.4	90.9	80-120	0.55	20
HMX	1.98	1.97	ND	1.83	1.78	92.4	90.4	75-125	2.2	20
NITROGLYCERIN	1.98	1.97	ND	1.83	1.77	92.4	89.8	68-131	2.9	20
RDX	1.98	1.97	ND	1.58	1.56	79.8	79.2	70-135	0.75	20
TETRYL	1.98	1.97	ND	1.62	1.60	81.8	81.2	10-150	0.74	20
SURROGATE: 1,2-DINITROBENZEN	1.98	1.97	NA	1.85	1.82	93.4	92.4	70-130		

Comments: _____

<u>Primary</u>	<u>SPK</u>	<u>DUP</u>
Quant Method :	W150729.M	W150729.M
Extraction Date :	11/18/15	11/18/15
Analysis Date :	11/20/15	11/20/15
Instrument :	Waldorf	Waldorf
Run :	1117_000138	1117_000139
Initials :		MP

Printed: 12/07/15 11:57:13 AM

APPL MSD SCII

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000138.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 20-Nov-2015, 18:06:14
 Operator : MP
 Sample : AZ24401S01_MS-1 7.905 DF 11/18/15
 Misc : Soil
 ALS Vial : 4289 Sample Multiplier: 7.90514

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 21 11:57:18 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>							
System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.721	0	3057984	N.D.	1852.032 #
	Spiked Amount	592.885		Recovery	=	0.00%	312.38%
<hr/>							
Target Compounds							
1)	TM HMX	0.000	0.950	0	6168389	N.D.	1825.692 #
2)	TM RDX	0.000	1.799	0	3390714	N.D.	1581.956 #
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.	M N.D. d
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	M N.D. d
6)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	N.D.
7)	TM NITROBENZENE	0.000	0.000	0	0	N.D.	N N.D. d
8)	TM NITROGLYC...	6.265	6.267	1234712	32777	1831.694	NoCal #
9)	TM TETRYL	6.718	6.720	3454762	2158144	NoCal	1621.606 #
10)	TM 2,4,6-TRI...	7.182	0.000	3580159	0	NoCal	M N.D. d
11)	TM 2-AMINO-4...	7.498	0.000	3970333	0	NoCal	M N.D. d
12)	TM 4-AMINO-2...	7.845	0.000	3531140	0	NoCal	M N.D. d
13)	TM 2,4-DINIT...	8.988	8.988	1923365	2637261	NoCal	1793.405 #
14)	TM 2,6-DINIT...	9.351	9.351	2063864	1503930	NoCal	1812.263 #
15)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.	M N.D. d
16)	TM 4-NITROTO...	0.000	0.000	0	0	N.D.	M N.D. d
17)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.	M N.D. d
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

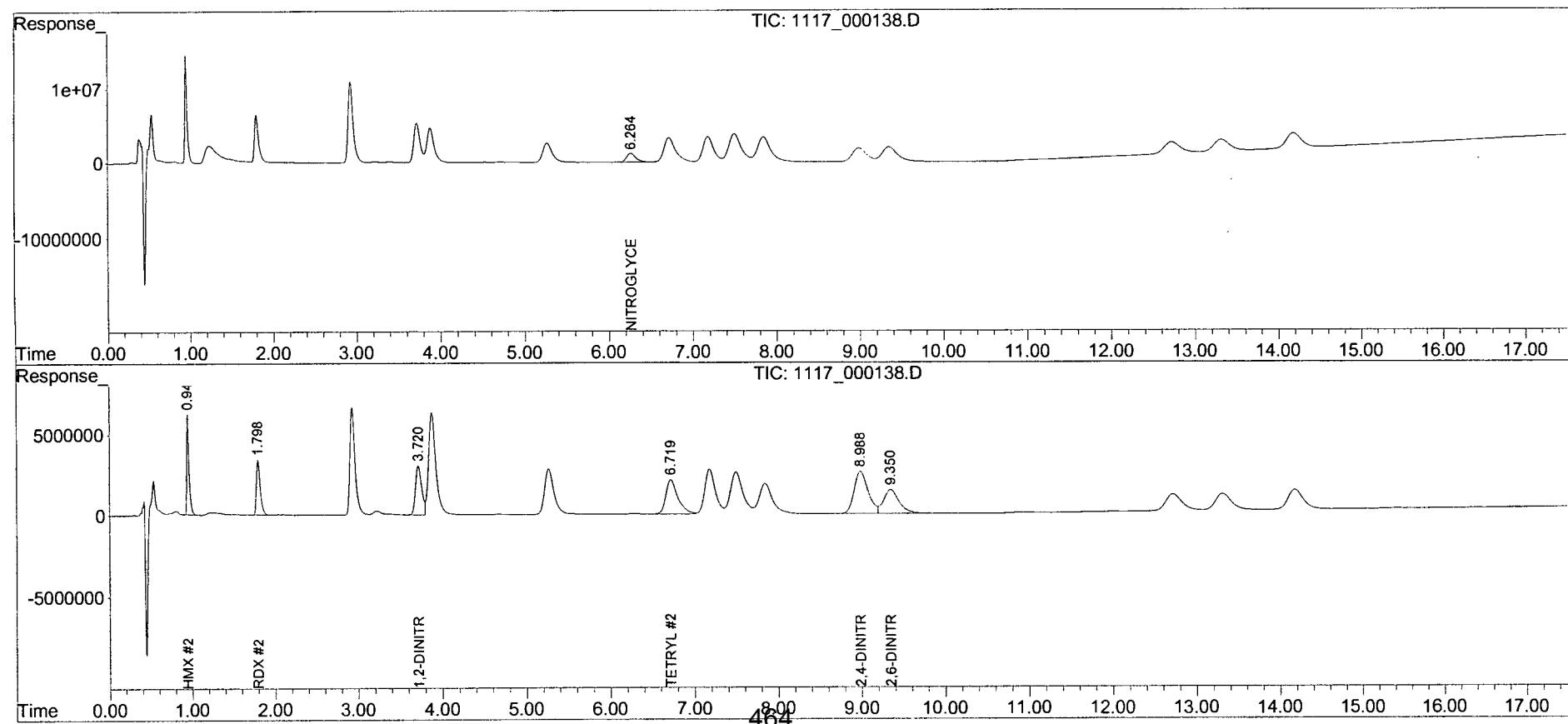
11-27-15

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
Data File : 1117_000138.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 20-Nov-2015, 18:06:14
Operator : MP
Sample : AZ24401S01_MS-1 7.905 DF 11/18/15
Misc : Soil
ALS Vial : 4289 Sample Multiplier: 7.90514

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Nov 21 11:57:18 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
 Data File : 1117_000139.D
 Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
 Acq On : 20-Nov-2015, 18:43:44
 Operator : MP
 Sample : AZ24401S01_MSD-1 7.890 DF 11/18/15
 Misc : Soil
 ALS Vial : 4290 Sample Multiplier: 7.88955

Integration File signal 1: Waldorf_Signal_1_110721.e
 Integration File signal 2: Waldorf_Signal_2_110803.e
 Quant Time: Nov 21 11:58:07 2015
 Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
 Quant Title : 8330B - Soil - Waldorf
 QLast Update : Thu Jul 30 16:23:51 2015
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 40uL
 Signal #1 Phase : 214nm Signal #2 Phase: 254nm
 Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0m
 m 1.8-micron

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
<hr/>							
System Monitoring Compounds							
4)	S 1,2-DINIT...	0.000	3.719	0	3009992	N.D.	1819.371 #
	Spiked Amount	591.716		Recovery	=	0.00%	307.47%
<hr/>							
Target Compounds							
1)	TM HMX	0.000	0.947	0	6030260	N.D.	1781.289 #
2)	TM RDX	0.000	1.796	0	3357312	N.D.	1563.283 #
3)	TM 1,3,5-TRI...	0.000	0.000	0	0	N.D.	NT N.D. d
5)	TM 1,3-DINIT...	0.000	0.000	0	0	N.D.	NT N.D. d
6)	TM 3,5-DINIT...	0.000	0.000	0	0	N.D.	NT N.D. d
7)	TM NITROBENZENE	0.000	0.000	0	0	N.D.	NT N.D. d
8)	TM NITROGLYC...	6.263	6.268	1198177	32803	1773.988	NoCal #
9)	TM TETRYL	6.720	6.721	3408503	2135956	NoCal	1601.769 #
10)	TM 2,4,6-TRI...	7.183	0.000	3535941	0	NoCal	NT N.D. d
11)	TM 2-AMINO-4...	7.502	0.000	3852717	0	NoCal	NT N.D. d
12)	TM 4-AMINO-2...	7.851	0.000	3454991	0	NoCal	NT N.D. d
13)	TM 2,4-DINIT...	8.996	8.996	1892579	2593395	NoCal	1760.096 #
14)	TM 2,6-DINIT...	9.362	9.361	2032869	1487111	NoCal	1788.461 #
15)	TM 2-NITROTO...	0.000	0.000	0	0	N.D.	NT N.D. d
16)	TM 4-NITROTO...	0.000	0.000	0	0	N.D.	NT N.D. d
17)	TM 3-NITROTO...	0.000	0.000	0	0	N.D.	NT N.D. d
18)	TM PETN	0.000	0.000	0	0	N.D.	N.D.

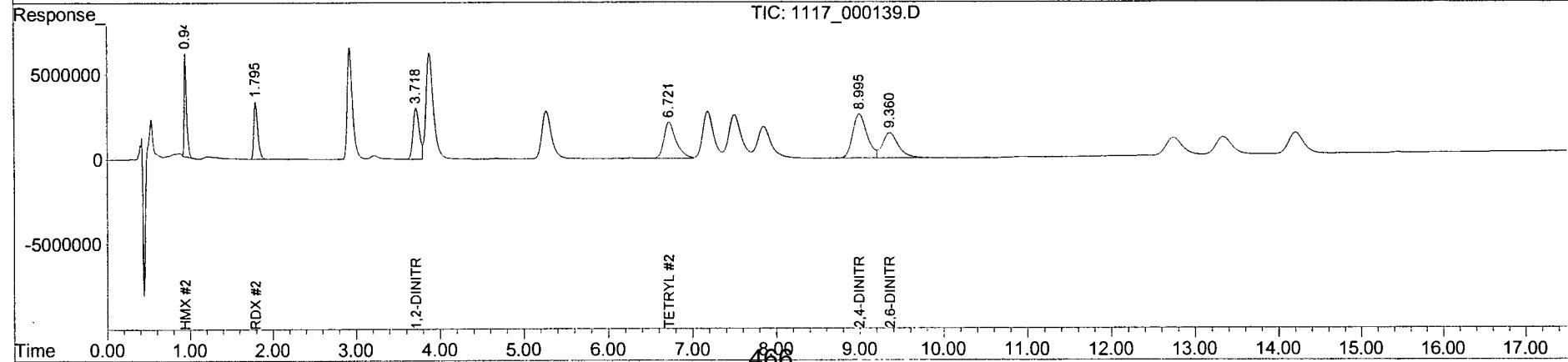
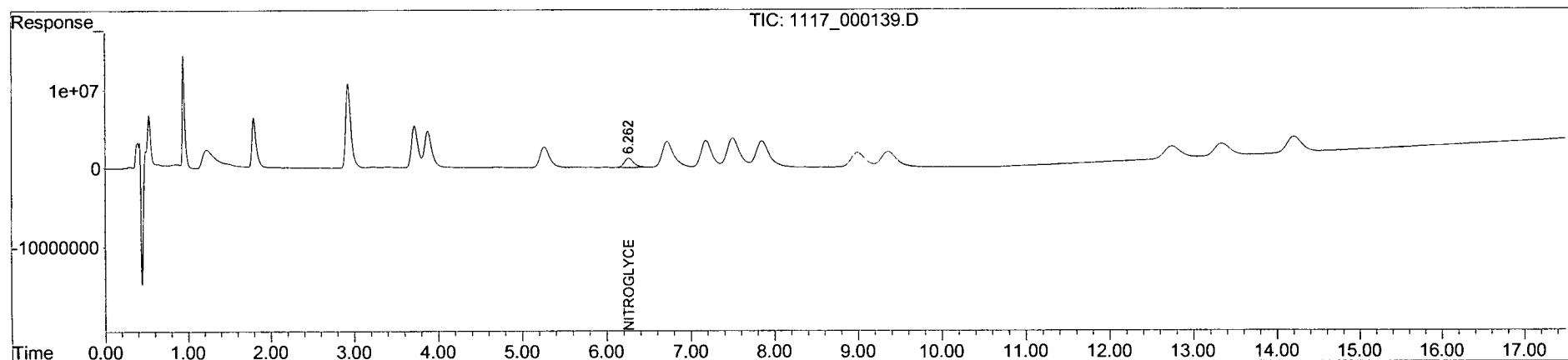
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int. 11-27-15

Quantitation Report (QT Reviewed)

Data Path : Z:\WALDORF\CHEM32\2\DATA\150729\151117\
Data File : 1117_000139.D
Signal(s) : Signal #1: DAD1B.ch Signal #2: DAD1A.ch
Acq On : 20-Nov-2015, 18:43:44
Operator : MP
Sample : AZ24401S01_MSD-1 7.890 DF 11/18/15
Misc : Soil
ALS Vial : 4290 Sample Multiplier: 7.88955

Integration File signal 1: Waldorf_Signal_1_110721.e
Integration File signal 2: Waldorf_Signal_2_110803.e
Quant Time: Nov 21 11:58:07 2015
Quant Method : Z:\WALDORF\CHEM32\2\DATA\150729\151117\W150729.M
Quant Title : 8330B - Soil - Waldorf
QLast Update : Thu Jul 30 16:23:51 2015
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 40uL
Signal #1 Phase : 214nm Signal #2 Phase: 254nm
Signal #1 Info : ZORBAX Extend-C18 Signal #2 Info : ZORBAX Extend-C18 100x3.0mm 1.8-micron



LC/MS STANDARD PREP LOG# 104 PAGE# 103

	INITIAL STANDARD	SOURCE CONC	FINAL DATE	FINAL ALIQUOT	SOL. EN. VOLUME	103 LOT#	DATE INITIALS
--	---------------------	----------------	---------------	------------------	--------------------	-------------	------------------

83TS/sph/surr 100 DF MAFS 1.0g/-
832TS SP 20 09-25-14 0.10 10 10 DF bco 11/22/14 12-22-14 ✓
8321 Surr 20 12-18-14 0.10 1 -

8373 SP18-11 10DF 12-22-14 8.10 1.0 100DF 100GDS 14/-1 12-22-14 10

Teflon 1000 kg/m³ 12-23-14

Teky 1/1000 vsg/l ~1 Absolute Lot 112310-33875, I
broke off - the vial & d transferred to an ecul-
1.8 ml injection VT=1 → Teky LSS 1000 vsg/l 112-23-14

1:1 Acu/Resk 12-23-14 N

I took 0.250 mL Acetonitrile Lot DK902. N^P

1,2-DNP 1000 µg/kg 12-23-14

I broke off the vial labeled
to the left and transferred
to an amber 1.8 ml reaction
vial → 1,2, DNB 1000 µl - 1 12-27-14

1,2-Dinitrobenzene
Lot #: 227342 - 34120
Rec: 10/6/14 MFR exp. 5/3/17

3.5-DNA 1000 μ g/ml 12-23-14

I broke off the vial labeled
to the left and transferred to
an amber 1.8 ml injection vial
→ 3,5-DNA 1000 µg/l 12-27-14

Lot #: 199709-33124
Rec: 11/15/13 MFR exp. 11/21/15

106

STANDARD	INITIAL CONC	SOURCE DATE	FINAL ALIQUOT	FINAL VOLUME	SOLVENT	DATE
PETN	1000 ug/ml					12-29-14
S-12837A4-5ML	Exp 4/30/2015					
 PO BOX 599	Pentaerythritol tetranitrate					
	Lot #: 2377700 - 34516					
	Rec: 12/16/14 MFR exp. 4/30/15					
	Lot: 2677700					
	1000ug/ml In Acetonitrile					
	FLAMMABLE-POISON-LACHRYMATOR					
PETN	1000 ug/ml					12-29-14
PETN	1000	12-29-14	0.5	5.0	100	1:1 Acn/ACN
						12-29-14
						07-2-14
M-614 PGDN sph	10 ug/ml					12-29-14
PGDNA	100	10-27-14	0.10	1.0	10.0	1:1 Acn/ACN
						01-06-15
						7-2-14
PGDN sph	1.0 ug/ml					12-29-14
PGDN sph	10	01-06-15	0.10	1.0	1.0	1:1 Acn/ACN
						01-06-15
						7-2-14
Nitroglycerin	100 ug/ml					12-29-14
Nitroglycerin	1000	08-06-14	0.50	5.0	100	1:1 Acn/ACN
						01-06-15
						12-29-14
P330MXA sph	10 ug/ml					12-29-14
P330MXA sph	100	09-17-14	0.150	1.5	10.0	1:1 Acn/ACN
						01-06-15
						12-29-14
P330MXA sph	1.0 ug/ml					12-29-14
P330MXA sph	10.0	01-06-15	0.150	1.5	1.0	1:1 Acn/ACN
						01-06-15
						12-29-14

010

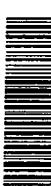
GC/MS STANDARD PREP LOG# 105 Page 10

STANDARD	INITIAL CONC	SOURCE DATE	FINAL ALIQUOT	FINAL VOLUME	SOLVENT # CONC	LOT#	DATE # INITIALS
----------	--------------	-------------	---------------	--------------	----------------	------	-----------------

8330 MX-A 10.0 µg/ml 10 3-5-15

MX-8330R 1000 µg/ml

10 03-05-15



AccuStandard

Method 8330 - Explosives
Lot #: 211111132-01 - 33806
Rec: 7/14/14 MFR exp. 6/6/15
1000 µg/mL in MeOH:AcCN
Lot: 211111132-01
Exp: Jun 06, 2015

Method 8330 - Explosives
Lot #: 211111132-01 - 33806
Rec: 7/14/14 MFR exp. 6/6/15

14 comp(s)
HIGHLY FLAMMABLE

FOR LABORATORY USE ONLY

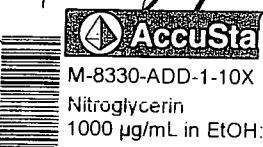
I225 H320 H315 H311
H32 H301 P338 P360
.340 P404 P262 P202
P261 P281

Storage: Freeze (<-10° C).
2 Danger

I broke open the vial labeled above
and transferred to an amber 1.8 ml
injection vial ¹⁰ 3-5-15
→ MX-8330R 1000 µg/ml 03-05-15

Nitroglycerin 1000 µg/ml

10 03-05-15



AccuStandard

Nitroglycerin
Lot #: 213031341 - 33130
Rec: 11/18/13 MFR exp. 5/9/15
1000 µg/mL in EtOH:MeOH (97:3)
Lot: 213031341
Exp: May 9, 2015

HIGHLY FLAMMABLE



FOR LABORATORY USE ONLY

mL

STORAGE Refrig (0-5° C)

2 Danger

I broke open the vial labeled above and
transferred to an amber 1.8 ml injection
vial → Nitroglycerin 1000 µg/ml 03-05-15

8330 MX-A 10.0 µg/ml

03-05-15 10

MX-8330R 1000 03-05-15 0.20 20 10.0 1:1 ACN/MeOH 03-05-15
1,2-DNB 1000 03-05-15 0.20 1 1 1 1

028

ICPMS STANDARD, PAPER LOOM 105, Lot 28

STANDARD	INITIAL CONC	SOURCE DATE	FINAL ALiquOT	FINAL VOLUME	NO. CONC	LOT#	DATE / INITIALS
----------	--------------	-------------	---------------	--------------	----------	------	-----------------

Sp-nosed

03-31-15

Source: Chem Serv. 6 wt vial std 13.0475

lot: 2511400-33484 tare 15.0337

purity: 96.6 wt std 0.0138

Concentration Final Volume 10.0ml Recd/54261

$$\frac{0.01383}{10\text{ml}} \times 0.966 \times \frac{10^6 \text{ug}}{7} = 1333 \text{ug/l}$$

Sp-nosed A Concentration

$$1333 \times 0.850 = 1133 \text{ug/l}$$

Sp-nosed D Concentration

$$1333 \times 0.15 = 200 \text{ ug/l}$$

Sp-nosed sph 5.0 ug/l

03-31-15

Sp-nosed A 1133 03-31-15 0.110 25.0 5.0 Recd/54261 N

Sp-nosed sph 10 ug/l

N

Sp-nosed A 1133 03-31-15 0.221 25.0 10 Recd/54261 03-31-15

HPCDS 1.0 ug/l

HPCDS 100 02-18-15 2.0 200 1.0 Recd/54261 03-31-15 N

1,2-DNB 5.0 ug/l

03-05-15

1,2-DNB 1000 03-05-15 0.050 10 5.0 1:1 Acn/Recd 04-02-15 N

PETN 100 ug/l

PETN 1000 12-29-14 1.0 10,0 100 1:1 Acn/Recd 04-02-15 N
03-05-15

044

MMS STANDARD PREP LOG# 105 44

STANDARD	INITIAL SOURCE CONC	FINAL DATE ALIQUOT	FINAL VOLUME	SOLVENT	DATE / CONC	LOT#	INITIALS
PETN-ss	1000 µg/ml	1/1					

 **AccuStandard®** 125 Market Street • New Haven, CT 06513 • USA
 Tel: 203.786.5800
 M-8330-ADD-2-10X PETN
 PETN Lot #: 214091329 - 34515
 1000 µg/mL in Methanol Rec: 12/16/14 MFR exp. 9/18/16
 Lot: 214091329 Storage: Refrig (0-5° C)
 Exp: Sep 18, 2016 1 comp(s) HIGHLY FLAMMABLE
2 Danger

04-28-15

hp

I broke open the vial labeled above
 and transferred to an amber 1.8 ml
 injection vial → PETN-ss 1000 µg/ml 4-28-15

PETN-ss 100 µg/ml 3-5-15 hp
 PETN-ss 1000 04-28-15 0.10 1.0 100 1.1 Acn/meth 4-28-15

scale height comparison 04-28-15 hp
 Balance ID: Mettler AT-200 4-28-15

Tare-

S-weight	Balance reading
20 g	20.0000
1 g	1.0002
100 mg	0.1000
20 mg	0.0020 hp 4-28-15

052

VAMS STANDARD PREP LOGN 105 52

STANDARD	INITIAL CONC	SOURCE DATE	FINAL ALiquOT VOLUME	FINAL CONC	NO. TIN.	DATE	LOT#	INITIALS
Picric Acid	1000 $\mu\text{g}/\text{mL}$	AcN	5 μL	5 $\mu\text{g}/\text{mL}$				05-05-15 b
Picric Acid	1000 $\mu\text{g}/\text{mL}$	AcN	1	0.251				
	Lot 224008-33450	Received 7-31-14, I broke open the vial and transferred to a 1.8 mL amber injection vial → Picric Acid 1000 $\mu\text{g}/\text{mL}$ 05-05-15 4 5-5-15						
Picric Acid	20 $\mu\text{g}/\text{mL}$	AcN	1	0.55-15				b
Picric Acid	1000	05-05-15	0.020	2.0	20	AcN/DM394	05-05-15	
Picric Acid	0.2 $\mu\text{g}/\text{mL}$							b
Picric Acid	20	05-05-15	0.020	2.0	0.2	AcN/DM394	05-05-15	
Picric Acid	1000							
Picric Acid	5000	5-5-15	0.20	1.0	1000	AcN/DM394	5-5-15	b
Scav Surr	30 $\mu\text{g}/\text{mL}$							
1,7,5-N-methylhexahydronaphthalene-1,3,5-trizine	1217	04-29-15	4.93	200	30	AcN/DM394	05-05-15	b
MX8330R	1000 $\mu\text{g}/\text{mL}$							05-05-15
 AccuStandard®	M-8330-R	Method 8330 - Explosives Lot #: 21111132-01 - 33603 Rec: 7/14/14 MFR exp. 6/6/15 1000 $\mu\text{g}/\text{mL}$ in MeOH:AcCN (1:1) Lot: 21111132-01 Exp: Jun 06, 2015	FOR LABORATORY USE ONLY	I320 H315 H311 I301 P338 P360 >204 P262 P202 >284	14 comp(s)	Storage: Freeze (<-10° C)	2 Danger	

I broke open the vial labeled above and transferred to an amber 1.8 mL injection vial → MX8330R 1000 $\mu\text{g}/\text{mL}$ 05-05-15

VICMS STANDARD PREP LOG# 105 PAGE 53

STANDARD	INITIAL CONC	SOURCE DATE	FINAL AMOUNT	FINAL VOLUME	REL. TAN.	052	LOT#	INITIALS
	1,2-DNB 1000 µg/L					05-05-15P		
	1,2-Dinitrobenzene Solution, 1,000 mg/L, 1 mL	I broke open the vial labeled to the left and transferred to an amber 1.8 mL injection vial →						
	010086-01 Lot # 227342 <10 Degrees C Storage Expiry 3/May/2017 Solv: Acetonitrile 1,2-Dinitrobenzene Lot #: 227342 - 34116 Rec: 10/6/14 MFR exp. 5/3/17							
	MX8330 sph 1000 µg/L							
	MX8330R 1000 05-05-15	1.0 10 100 1:1 Acn/MeOH				05-05-15P		
	1,2-DNB 1000 05-05-15	1 1 1				05-05-15		
	8330MX-A sph 10.0 µg/mL				05-05-15			
	MX8330 sph 100 05-05-15	0.150 1.5 10 1:1 Acn/MeOH				05-05-15P		
	12-29-14 8330MX-A sph 1.0 µg/mL				05-05-15			
	12-29-14 8330MX-A sph 10 05-05-15	0.10 1.0 1.0 1:1 Acn/MeOH				05-05-15P		
	PETN 100 µg/L				05-05-15			
	PETN 1000 12-29-14 0.50 5.0 100 1:1 Acn/MeOH					05-05-15P		
	Nitroglycerin 100 µg/mL				05-05-15			
	Nitroglycerin 1000 05-05-15 0.5 5.0 100 1:1 Acn/MeOH					05-05-15P		
	3,5-DNA 100 µg/mL				05-05-15			
	3,5-DNA 1000 12-29-14 0.50 5.0 100 1:1 Acn/MeOH					05-05-15P		
	8330MX-B sph 10/50				05-05-15			
	PETN 1000 12-29-14 0.075 1.5 50 1:1 Acn/MeOH					05-06-15P		
	3,5-DNA 100 05-05-15 0.150 | 10 | 1 | 1							
	Nitroglycerin 100 05-05-15 0.150 | 1 | 1 | 1							

IC/MS STANDARD PREP LOG # 105 PAGES 60

060

STANDARD

INITIAL CONC	SOURCE DATE	FINAL ALiquOT VOLUME	FINAL CONC	SOLVENT / DATE	LOT#	INITIALS
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HPLCFS 1.0 mg/ml

HPLCFS 1000 05-15-15 0.20 200 1.0 Acetone/54324 05-15-15 4P

HPLCFS-AQ 1.0 mg/ml

HPLCFS 1000 05-15-15 0.20 200 1.0 DMSO 05-15-15 4P

1,2-DNB 100 mg/ml

1,2-DNB 1000 3-5-15 0.5 5.0 100 1:1 Acetone/hexane 05-15-15 4P

8330 Mix-A SS 100 mg/ml

05-15-15 4P

8330 Mix A 100 mg/ml Absolute lot # 121311-

30129 I broke open the vial and
transferred to an amber 1.8ml injection

vial → 8330 Mix A 100 mg/ml 05-15-15 4P

1,2-DNB 1000 mg/ml

05-15-15 4P

1,2-Dinitrobenzene Solution,
1,000 mg/L, 1 mL

010086-01

Lot #: 227342 Storage Expiry

<10 Degrees C 3/May/2017

GHS Anesthetic

Lot #: 227342-34117

Rec: 10/6/14 MFR exp. 5/3/17

I broke open the vial

labeled to the left and

transferred to an amber

1.8ml injection vial →

1,2-DNB 1000 mg/ml 05-15-15 4P

MX-8330R 500 mg/ml

05-15-15 4P



AccuStandar

M-8330-R-0.5X

Method 8330 - Explosive:

0.5 mg/mL in Methanol:Acetonitrile (50:50)

Lot: 215031271

Exp: Mar 20, 2017

Method 8330 - Explosives

Lot #: 215031271 - 35173

Rec: 5/6/15 MFR exp. 3/20/17

14 comp(s)

HIGHLY FLAMMABLE

FOR LABORATORY USE ONLY

H225 H320 H315 H313

H332 H301 P-271 P338

P352 P340 P404 P260

P262 P202 P264 P284

Storage: Freeze (<-10° C)

2.Danger

I broke open the vial labeled above
and transferred to an amber 1.8ml
injection vial → MX-8330R 500 mg/ml 05-15-15

LC/MS STANDARD PREP LOG #105 PAGES 61

061

STANDARD	INITIAL CONC	SOURCE DATE	FINAL ALIQUOT	FINAL VOLUME	NO. IN. I ONE	DATE	LOT#	INITIALS
	8330MX-A-SS	100 µg/L /				05-15-15	P	
	8330 Mix A	100 µg/ml / Absolute	lot 103014-					
	34466, I broke open the vial and transferred to an amber 1.8 ml injection vial → 8330MX-A-SS 100 µg/ml 05-15-15							
	8330MX-B-SS	100 µg/ml /				05-15-15	P	
	8330 Mix B	100 µg/ml / Absolute	lot 103014-					
	34469, I broke open the vial and transferred to an amber 1.8 ml injection vial → 8330MX-B-SS 100 µg/ml 05-15-15							
	3,5-DNA	1000 µg/ml				05-15-15	P	
	3,5-Dinitroaniline (3,5-DNA) Solution, 1000 mg/L, 1 ml							
	Lot # 010612-04	Storage -10 Degrees C	Expiry 11/21/15					
	Soh: Acetonitrile							
	3,5-Dinitroaniline							
	Lot #: 199709-33125							
	Rec: 11/15/13 MFR exp. 11/21/15							

Nitroglycerin 1000 µg/ml 05-15-15



AccuStandard®

M-8330-ADD-1-10X

Nitroglycerin

1000 µg/mL in EtOH:MeOH (97:3)

Lot: 214021204

Exp: Mar 05, 2016

Nitroglycerin

Lot #: 214021204 - 33809

Rec: 7/14/14 MFR exp. 3/5/16

FOR LABORATORY USE ONLY

125 H320 H312 H335

132 H302 P338 P360

440 P404 P280 P262

202 P264 P284 P280

Storage: Refrig (0-5° C)

1 comp(s)
HIGHLY FLAMMABLE

2 Danger

I broke open the vial labeled above and transferred to an amber 1.8 ml injection vial → Nitroglycerin 1000 µg/ml 05-15-15

062

ICMS STANDARD PREP LOG 105 PAGES b2

STANDARD	INITIAL CONC	SOURCE DATE	FINAL ALiquOT	FINAL VOLUME	SOLVENT CONC	DATE LOT#	INITIALS
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PETN 1000 ug/ml 05-15-15 P

S-12837A4-5ML Exp 4/30/2019



Pentaerythritol tetranitrate

Lot #: 3825400 - 35168

Rec: 5/1/15 MFR exp. 4/30/19

Pentaerythritol

Signal Word: Danger

Lot: 3825400

1000ug/ml In Acetonitrile
FLAMMABLE-POISON-LACHRYMATOR

I broke open the

Vial labeled to the
left and transferred
to an 8ml Amber

Vial \rightarrow PETN

1000 ug/ml 05-15-15

Tetryl-SS 100 ug/ml 3-5-15 P
Tetryl-SS 1000 12-23-14 0.10 1.0 100 1:1 Acn/MeOH 05-15-15

PETN-SS 100 ug/ml

PETN 1000 04-28-15 0.10 1.0 100 1:1 Acn/MeOH 05-15-15 P

8330MX-A 10.0 ug/ml

MX-8330R 500 05-15-15 0.20 10.0 10 1:1 Acn/MeOH 05-15-15 P

1,2-DNB 1000 05-15-15 0.10 L L 03-05-15

8330MX-B 10.0 ug/ml

Nitroglycerin 1000 05-15-15 0.10 10.0 10 1:1 Acn/MeOH 05-15-15 P

3,5-DNA 1000 05-15-15 L L L L L

PETN 1000 05-15-15 L L L L L

L-VMS STANUARU PREP LOG 105 PAGES 93

093

STANDARD	INITIAL CONC	SOURCE DATE	FINAL ALiquOT	FINAL VOLUME	FINAL CONC	NOTEN.	DATE	LOT#	INITIALS
832_METH 0.6 PPM									
832_METH HPLC_IS	10.0 100	05/07/15 05/12/15	0.120 0.020	2.0 1	0.60	DI WATER	06/12/15		MP
832_METH 0.8 PPM									
832_METH HPLC_IS	10.0 100	05/07/15 05/12/15	0.160 0.020	2.0 1	0.80	DI WATER	06/12/15		
832_METH_SS 0.1 PPM									
832_METH_SS HPLC_IS	10.0 100	05/07/15 05/12/15	0.020 0.020	2.0 1	0.10	DI WATER	06/12/15		
832_METH_SS 0.4 PPM									
832_METH_SS HPLC_IS	10.0 100	05/07/15 05/12/15	0.080 0.020	2.0 1	0.40	DI WATER	06/12/15		

1,2-DNB 1000 mg/L 06-15-15 MP

1,2-Dinitrobenzene Solution,
1,000 mg/L, 1 mL
010086-01
Lot # Storage Expiry
227342 <10 Degrees C 3/May/2017
1,2-Dinitrobenzene
Lot #: 227342 - 34118
Rec: 10/6/14 MFR exp. 5/3/17

I broke open the vial
labeled to the left and
transferred to an empty
1.8 mL Injection Vial
→ 1,2-DNB 1000 mg/L 06-15-15

1,2-DNB 100 L/mL ✓

1,2-DNB 10.00 06-15-15 1.0 10.0 100 1:1 Acn/H2O 06-15-15

05-22-15

NOTE: THE FOLLOWING DOCUMENTATION WAS

PERFORMED AS DATED: JF 06-18-15

06-18-15

PER-IS 50:50 0.005 µg/mL 05-14-15 JF

Combined 10.000 mL Laboratory Source DI H2O 05-14-15

with 10.000 mL Burdick & Jackson Acetonitrile

Lot DL30B. Withdraw 1.000 mL and then

delivered 1.000 mL O2SI ¹⁸O₂ Perchlorate

100 µg/L lot 1074176-35163

1,2-DNB 1000 PPM

06/15/15

MP

1,2-DNB 1000 PPM,O2SI LOT 227342-34118, I BROKE OPEN THE VIAL AND TRANSFERRED
THE CONTENTS TO AN AMBER 1.8 ML INJECTION VIAL ---1,2-DNB 1000 PPM 06/15/15

STANDARD	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOLUME	SOVENT/LOT CONC.	DATE/IN.
1,2-DNB 100 PPM	1000	06/15/15	1.000	10.0	100.0 1:1 ACN/MEOH	06/15/15
1,2-DNB					05/22/15	MP

STANDARD		INITIAL CONC	SOL'RCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC.	SOLVENT/LOT	DATE/IN.
8330_CB(1:1) 1.0 PPM								
8330Mxa	10.0	06/21/15		0.100	1.0	1.0	1:1 ACN/MEOH	06/26/15
8330Mxb	10.0	06/21/15					05/22/15	MP
8330_CB(1:1) 0.1 PPM								
8330_CB(1:1)	1.0	06/26/15		0.100	1	0.1	1:1 ACN/MEOH	06/26/15
8330_CB 0.005 PPM								
8330_CB(1:1)	0.1	06/26/15		0.050	1	0.005	1:1:6_ACN	06/26/15
							MEOH: MILLIPOR	MP
8330_CB 0.010 PPM								
8330_CB(1:1)	0.1	06/26/15		0.100	1.00	0.010	1:1:6_ACN	06/26/15
							MEOH: MILLIPOR	MP
8330_CB 0.020 PPM								
8330_CB(1:1)	0.1	06/26/15		0.200	1.00	0.020	1:1:6_ACN	06/26/15
							MEOH: MILLIPOR	MP
8330_CB 0.050 PPM								
8330_CB(1:1)	1.0	06/26/15		0.050	1.00	0.050	1:1:6_ACN	06/26/15
							MEOH: MILLIPOR	MP
8330_CB 0.10 PPM								
8330_CB(1:1)	1.0	06/26/15		0.100	1.00	0.10	1:1:6_ACN	06/26/15
							MEOH: MILLIPOR	MP
8330_CB 0.20 PPM								
8330_CB(1:1)	1.0	06/26/15		0.20	1.00	0.20	1:1:6_ACN	06/26/15
							MEOH: MILLIPOR	MP
8330_CB 0.50 PPM								
8330Mxa	10.0	06/21/15		0.050	1.00	0.050	1:1:6_ACN	06/26/15
8330Mxb	10.0	06/21/15		0.050			MEOH: MILLIPOR	MP
8330_CB 1.0 PPM								
8330Mxa	10.0	06/21/15		0.100	1.00	1.000	1:1:6_ACN	06/26/15
8330Mxb	10.0	06/21/15		0.100			MEOH: MILLIPOR	MP
8330Mxa_CB 2.0 PFM								
8330Mxa_CB	10.0	06/21/15		0.200	1.00	2.000	1:1:6_ACN	06/26/15
							MEOH: MILLIPOR	MP
8330Mxb_CB 2.0 PPM								
8330Mxb_CB	10.0	06/21/15		0.200	1.00	2.000	1:1:6_ACN	06/26/15
							MEOH: MILLIPOR	MP
8330_SS 1.0 PPM								
8330Mxa_SS	100	05/15/15		0.010	1.00	1.0	1:1:6_ACN	06/26/15
8330Mxb_SS	100	05/15/15		0.010			MEOH: MILLIPOR	MP
PETN_TET_SS 1.0 PPM								
PETN_SS	100	05/15/15		0.01	1.00	1.0	1:1:6_ACN	06/26/15
TETRYL_SS	100	05/15/15		0.01			MEOH: MILLIPOR	MP

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC.	SOLVENT/LOT	DATE/IN.
8330Mxa_CB(1:1) 1.0 PPM 8330Mxa	10.0	05/15/15	0.100	1.0	1.0	1:1 ACN/MEOH 03/05/15	05/22/15 <i>H</i>
8330Mxa_CB(1:1) 0.10 PPM 8330Mxa_CB(1:1)	1.0	05/22/15	0.100	1.0	0.1	1:1 ACN/MEOH 03/05/15	05/22/15
8330Mxb_CB(1:1) 1.0 PPM 8330Mxb	10.0	05/15/15	0.100	1.0	1.0	1:1 ACN/MEOH 03/05/15	05/22/15 05/22/15
8330Mxb_CB(1:1) 0.10 PPM 8330Mxb_CB(1:1)	1.0	05/22/15	0.100	1.0	0.1	1:1 ACN/MEOH 03/05/15	05/22/15
8330Mxa_CB 0.005 PPM 8330Mxa_CB(1:1)	0.1	05/22/15	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330Mxa_CB 0.010 PPM 8330Mxa_CB(1:1)	0.1	05/22/15	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330Mxa_CB 0.020 PPM 8330Mxa_CB(1:1)	0.1	05/22/15	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330Mxa_CB 0.050 PPM 8330Mxa_CB(1:1)	1.0	05/22/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330Mxa_CB 0.10 PPM 8330Mxa_CB(1:1)	1.0	05/22/15	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330Mxa_CB 0.20 PPM 8330Mxa_CB(1:1)	1.0	05/22/15	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330Mxa_CB 0.50 PPM 8330Mxa	10.0	05/15/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330Mxa_CB 1.0 PPM 8330Mxa	10.0	05/15/15	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330Mxa_CB 2.0 PPM 8330Mxa_CB	10.0	05/15/15	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330Mxb_CB 0.005 PPM 8330Mxb_CB(1:1)	0.1	05/22/15	0.050	1	0.005	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330Mxb_CB 0.010 PPM 8330Mxb_CB(1:1)	0.1	05/22/15	0.100	1.00	0.010	1:1:6_ACN/MEOH MILLIPORE	05/22/15

8330MXB_CB 0.020 PPM 8330MXB_CB(1:1)	0.1	05/22/15	0.200	1.00	0.020	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330MXB_CB 0.050 PPM 8330MXB_CB(1:1)	1.0	05/22/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330MXB_CB 0.10 PPM 8330MXB_CB(1:1)	1.0	05/22/15	0.100	1.00	0.100	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330MXB_CB 0.20 PPM 8330MXB_CB(1:1)	1.0	05/22/15	0.200	1.00	0.200	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330MXB_CB 0.50 PPM 8330MXB_CB	10.0	05/15/15	0.050	1.00	0.050	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330MXB_CB 1.0 PPM 8330MXB_CB	10.0	05/15/15	0.100	1.00	1.000	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330MXB_CB 2.0 PPM 8330MXB_CB	10.0	05/15/15	0.200	1.00	2.000	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330MXA_SS 1.0 PPM 8330MXA_SS	100	05/15/15	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	05/22/15
8330MXB_SS 1.0 PPM 8330MXB_SS	100	05/15/15	0.010	1.00	1.0	1:1:6_ACN/MEOH MILLIPORE	05/22/15
PETN_TET_SS 1.0 PPM PETN_SS TETRYL_SS	100	05/15/15	0.01	1.00	1.0	1:1:6_ACN MEOH: MILLIPORE	05/22/15

Organic Extraction Worksheet

Method	Explosives Soil Extraction 8330B	Extraction Set	151118A	Extraction Method	MSE018	Units	mL
Spiked ID 1	8330 100ppm STK 8-24-15 exp 2-24-16		Surrogate ID 1	1,2-DNB STK 100 PPM 11-17-15 exp 5-17-16			
Spiked ID 2	Nitroglycerin 100ppm 11-4-15 exp 5-4-16		Surrogate ID 2				
Spiked ID 3	PETN 100ppm 100ppm 11-4-15 exp 5-4-16		Surrogate ID 3				
Spiked ID 4			Surrogate ID 4				
Spiked ID 5			Surrogate ID 5				
Spiked ID 6			Sufficient Vol for Matrix QC:	YES			
Spiked ID 7			Ext. Start Time:	11/18/15 15:55			
Spiked ID 8			Ext. End Time:	11/19/15 9:55			
			GC Requires Extract By:				
			pH1				Water Bath Temp Criteria
			pH2				
			pH3				

Spiked By: DL

Date 11/18/15 3:30:00 PM

Witnessed By: CFM

Date 11/18/15 3:30:00 PM

Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1 151118A Blk				0.060	1 equip	10.14g	20mLs	NA	11/18/15 15:55	
2 151118A LCS-1		0.200	1-3	NA	NA equip	10.18g	20mLs	NA	11/18/15 15:55	
3 AZ22872	AZ22872S01			0.060	1 equip	10.16g	20mLs	NA	11/18/15 15:55	77557 - RTC
4 AZ24396	AZ24396S01			0.060	1 equip	10.15g	20mLs	NA	11/18/15 15:55	77838
5 AZ24397	AZ24397S01			0.060	1 equip	10.11g	20mLs	NA	11/18/15 15:55	77838
6 AZ24398	AZ24398S01			0.060	1 equip	10.18g	20mLs	NA	11/18/15 15:55	77838
7 AZ24399	AZ24399S01			0.060	1 equip	10.10g	20mLs	NA	11/18/15 15:55	77838
8 AZ24400	AZ24400S01			0.060	1 equip	10.16g	20mLs	NA	11/18/15 15:55	77838
9 AZ24401 MS-1	AZ24401S01	0.200	1-2	NA	NA equip	10.12g	20mLs	NA	11/18/15 15:55	77838
10 AZ24401 MSD-1	AZ24401S01	0.200	1-2	NA	NA equip	10.14g	20mLs	NA	11/18/15 15:55	77838
11 AZ24401	AZ24401S01			0.060	1 equip	10.13g	20mLs	NA	11/18/15 15:55	77838
12 AZ24856 MS-1	AZ24856M01	0.200	1-3	NA	NA equip	10.00g	20mLs	NA	11/18/15 15:55	77905
13 AZ24856 MSD-1	AZ24856M01	0.200	1-3	NA	NA equip	10.09g	20mLs	NA	11/18/15 15:55	77905
14 AZ24856	AZ24856M01			0.060	1 equip	10.12g	20mLs	NA	11/18/15 15:55	77905
15 AZ24858	AZ24858M01			0.060	1 equip	10.14g	20mLs	NA	11/18/15 15:55	77905
16 AZ25037	AZ25037M01			0.060	1 equip	10.06g	20mLs	NA	11/18/15 15:55	77927

Solvent and Lot#	
Acetonitrile	DN 212
Silica Sand	041913
CHECK SAMPLE	LRAA3956

Extraction COC Transfer	
Extraction lab employee Initials	CFM
GC analyst's initials	<i>W</i>
Date	<i>11-19-15</i>
Time	<i>1150</i>
Refrigerator	<i>Brown</i>

Technician's Initials	
Scanned By	CFM
Sample Preparation	CFM
Extraction	CFM
Concentration	-----
Modified	11/19/15 8:48:42 AM

Reviewed By: *W*Date *11-19-15*

Ext_ID 48249534

Injection Log

Directory: Z:\WALDORF\CHEM32\2\DATA\150729\150729

Line	Vial	FileName	Multiplier	SampleName	Misc	Info	Injected
1	0	0729_0000019.D		8330_CB_0.005 PPM 07/29/15			7/29/15 19:31
2	0	0729_0000020.D		8330_CB_0.010 PPM 07/29/15			7/29/15 19:58
3	0	0729_0000021.D		8330_CB_0.020 PPM 07/29/15			7/29/15 20:26
4	0	0729_0000022.D		8330_CB_0.050 PPM 07/29/15			7/29/15 20:53
5	0	0729_0000023.D		8330_CB_0.10 PPM 07/29/15			7/29/15 21:21
6	0	0729_0000024.D		8330_CB_0.20 PPM 07/29/15			7/29/15 21:48
7	0	0729_0000025.D		8330_CB_0.50 PPM 07/29/15			7/29/15 22:16
8	0	0729_0000026.D		8330_CB_1.0PPM_07/29/15			7/29/15 22:43
9	0	0729_0000027.D		8330MXA_CB_2.0 PPM 07/29/15			7/29/15 23:11
10	0	0729_0000028.D		8330MXB_CB_2.0 PPM 07/29/15			7/29/15 23:38
11	0	0729_0000032.D		8330_SS_1.0 PPM 07/29/15			7/30/15 1:28
12	0	0729_0000033.D		PETN TETRYL SS 1.0 PPM 07/29/15			7/30/15 1:56

METALS

APPL, INC.

METALS

QC Summary

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	ALUMINUM (AL)	4.00 U	50.0	4.00	1.98	mg/Kg	11/23/15	11/24/15	#61CJU-151123A-AZ24401
6010C	BORON (B)	4.00 U	5.0	4.00	1.55	mg/Kg	11/23/15	11/24/15	#61CJU-151123A-AZ24401
6010C	LITHIUM (LI)	0.500 U	0.67	0.500	0.250	mg/Kg	11/23/15	11/24/15	#61CJU-151123A-AZ24401
6010C	ZINC (ZN)	4.00 U	8.0	4.00	1.15	mg/Kg	11/23/15	11/24/15	#61CJU-151123A-AZ24401

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/Kg	SPK Result mg/Kg	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	ALUMINUM (AL)	200	187	93.5	80-120	11/23/15	11/24/15	#61CJU-151123A-AZ24401
EPA 6010C	BORON (B)	25.0	24.4	97.6	80-120	11/23/15	11/24/15	#61CJU-151123A-AZ24401
EPA 6010C	LITHIUM (LI)	10.00	11.0	110	80-120	11/23/15	11/24/15	#61CJU-151123A-AZ24401
EPA 6010C	ZINC (ZN)	50.0	52.8	106	80-120	11/23/15	11/24/15	#61CJU-151123A-AZ24401

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: 151123S-24401 MS - 202562

APPL Inc.

Sample ID: AZ24401

908 North Temperance Avenue

Client ID: S67-SS53-0006

Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/Kg	Matrix Res mg/Kg	SPK Res mg/Kg	DUP Res mg/Kg	SPK % Recovery	DUP % Recovery	RPD Max	RPD Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample	
EPA 6010C	ALUMINUM (AL)	388	8900	9880	12100	253 #	825 #	20.2 #	20	80-120	11/23/15	11/24/15	11/23/15	11/24/15	202562	AZ24401
EPA 6010C	BORON (B)	48.5	21.3	59.5	65.5	78.8 #	91.1	9.6	20	80-120	11/23/15	11/24/15	11/23/15	11/24/15	202562	AZ24401
EPA 6010C	LITHIUM (LI)	19.4	7.1	29.0	30.7	113	122 #	5.7	20	80-120	11/23/15	11/24/15	11/23/15	11/24/15	202562	AZ24401
EPA 6010C	ZINC (ZN)	97.1	28.6	107	111	80.7	84.9	3.7	20	80-120	11/23/15	11/24/15	11/23/15	11/24/15	202562	AZ24401

= Recovery is outside QC limits.

Comments: _____

6010C/3050B

Form 4

Blank Summary

Lab Name: APPL, Inc.
 Case No: 77838
 Matrix: SOIL
 Blank ID: 151123A-BLK

SDG No: 77838
 Date Analyzed: 11/24/15
 Instrument: Phoebe
 Time Analyzed: 1231

APPL ID.	Client Sample No.	File ID.	Date Analyzed
151123A-MSD	Matrix SpikeD	151124A	11/24/15 1448
151123A-MS	Matrix Spike	151124A	11/24/15 1444
151123A-LCS	Lab Control Spike	151124A	11/24/15 1236
AZ24401	S67-SS53-0006	151124A	11/24/15 1316
AZ24400	S67-SS52-0006	151124A	11/24/15 1312
AZ24399	S67-SS51-0006	151124A	11/24/15 1308
AZ24397	S67-SS50-0006P	151124A	11/24/15 1259
AZ24396	S67-SS50-0006	151124A	11/24/15 1255
151123A-BLK	Blank	151124A	11/24/15 1231
AZ24401	S67-SS53-0006	151124A	11/24/15 1439
AZ24400	S67-SS52-0006	151124A	11/24/15 1435
AZ24399	S67-SS51-0006	151124A	11/24/15 1431
AZ24398	S67-SB50-1618	151124A	11/24/15 1426
AZ24397	S67-SS50-0006P	151124A	11/24/15 1422
AZ24396	S67-SS50-0006	151124A	11/24/15 1418

Comments: Batch: #61CJU-151123A

METALS

Sample Data



Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24396

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 15.9 Percent Moisture.)									
6010C/3050B	ALUMINUM (AL)	5970	1190.0	95.00	47.00	mg/Kg	20	11/23/15	11/24/15
6010C/3050B	BORON (B)	4.80 U	5.9	4.80	1.80	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	LITHIUM (LI)	5.0	0.80	0.590	0.300	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	ZINC (ZN)	24.6	9.5	4.80	1.40	mg/Kg	1	11/23/15	11/24/15

Printed: 12/01/15 11:01:25 AM

PL-F1-SC-MCRes/MCPQL-REG MDLs

=====
Sequence No.: 38
Sample ID: AZ24396S01
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 1.02 g
Dilution:

=====
Autosampler Location: 64
Date Collected: 11/24/15 2:18:04 PM
Data Type: Reprocessed on 11/25/15 9:11:24 AM
Initial Sample Vol:
Sample Prep Vol: 100 mL

Mean Data: AZ24396S01

Analyte	Mean Corrected	Calib.	Sample			RSD
	Intensity	Conc. Units	Std.Dev.	Conc. Units	Std.Dev.	
Y 371.029	828878.6	104.4 %	0.18			0.18%
Y 371.029 Radial	760449.9	104.2 %	0.21			0.20%
Ag 338.289†	-470.6	-4.402 ug/L	0.4547	-0.432 mg/kg	0.0446	10.33%
Al 308.215†	29878.0	48010 ug/L	412.4	4706 mg/kg	40.4	0.86%
As 188.979†	48.6	16.06 ug/L	0.242	1.574 mg/kg	0.0237	1.51%
B†	416.7	9.642 ug/L	0.3913	0.945 mg/kg	0.0384	4.06%
Ba 233.527†	35528.0	260.1 ug/L	0.82	25.50 mg/kg	0.081	0.32%
Be 313.107†	471.8	2.171 ug/L	0.0684	0.213 mg/kg	0.0067	3.15%
Ca 315.887†	31098.4	7625 ug/L	55.5	747.5 mg/kg	5.44	0.73%
Cd 214.440†	793.1	-0.027 ug/L	0.0531	-0.003 mg/kg	0.0052	193.71%
Co 228.616†	1074.3	15.33 ug/L	0.122	1.503 mg/kg	0.0120	0.80%
Cr 267.716†	7264.1	86.98 ug/L	0.095	8.528 mg/kg	0.0093	0.11%
Cu 327.393†	2095.1	29.53 ug/L	0.696	2.895 mg/kg	0.0683	2.36%
Fe 273.955†	1336493.9	76370 ug/L	286.6	7487 mg/kg	28.1	0.38%
K 766.490†	6101.3	2308 ug/L	53.2	226.3 mg/kg	5.22	2.31%
Mg 285.213†	24688.3	3240 ug/L	33.4	317.6 mg/kg	3.28	1.03%
Mn 257.610†	4791.8	394.7 ug/L	3.57	38.69 mg/kg	0.350	0.90%
Mo 202.031†	-4.0	4.086 ug/L	0.3548	0.401 mg/kg	0.0348	8.68%
Na 589.592†	2152.3	-86.04 ug/L	12.049	-8.436 mg/kg	1.1813	14.00%
Ni 231.604†	886.4	23.20 ug/L	0.460	2.274 mg/kg	0.0451	1.98%
P 213.617†	4446.7	1181 ug/L	5.3	115.7 mg/kg	0.52	0.45%
Pb 220.353†	1718.5	168.4 ug/L	1.23	16.51 mg/kg	0.120	0.73%
Sb 206.836†	4.6	1.080 ug/L	0.5634	0.106 mg/kg	0.0552	52.18%
Se 196.026†	30.6	9.668 ug/L	1.1706	0.948 mg/kg	0.1148	12.11%
Sn 189.927†	8.9	7.452 ug/L	0.7493	0.731 mg/kg	0.0735	10.05%
Sr 421.552†	10437.8	22.50 ug/L	0.229	2.206 mg/kg	0.0225	1.02%
Ti 337.279†	25041.3	940.5 ug/L	13.28	92.21 mg/kg	1.302	1.41%
Tl 190.801†	5.0	1.033 ug/L	0.7703	0.101 mg/kg	0.0755	74.55%
V 292.402†	26297.9	141.5 ug/L	0.87	13.87 mg/kg	0.085	0.61%
Zn 206.200†	7607.0	211.2 ug/L	0.77	20.70 mg/kg	0.075	0.36%
Li 670.784	571188.9	43.32 ug/L	0.443	4.247 mg/kg	0.0434	1.02%

Sequence No.: 20
 Sample ID: AZ24396S01-1/20
 Analyst: RJS
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt: 1.02 g
 Dilution: 20X

Autosampler Location: 50
 Date Collected: 11/24/15 12:55:13 PM
 Data Type: Reprocessed on 11/25/15 9:10:58 AM
 Initial Sample Vol:
 Sample Prep Vol: 100 mL

Mean Data: AZ24396S01-1/20

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	811822.8	102.3 %	1.02			1.00%
Y 371.029 Radial	747488.1	102.5 %	1.08			1.05%
Ag 338.289†	51.5	0.482 ug/L	0.3491	0.944 mg/kg	0.6844	72.48%
Al 308.215†	1594.6	2562 ug/L	51.5	5024 mg/kg	101.0	2.01%
As 188.979†	-2.9	-0.951 ug/L	0.7054	-1.865 mg/kg	1.3831	74.16%
Bt	56.0	1.296 ug/L	0.1386	2.542 mg/kg	0.2717	10.69%
Ba 233.527†	1983.9	14.54 ug/L	0.138	28.51 mg/kg	0.271	0.95%
Be 313.107†	33.4	0.154 ug/L	0.0129	0.301 mg/kg	0.0253	8.40%
Ca 315.887†	1655.2	405.8 ug/L	3.26	795.7 mg/kg	6.38	0.80%
Cd 214.440†	44.7	0.004 ug/L	0.0648	0.008 mg/kg	0.1271	>999.9%
Co 228.616†	61.6	0.895 ug/L	0.1732	1.755 mg/kg	0.3396	19.35%
Cr 267.716†	373.2	4.476 ug/L	0.1314	8.776 mg/kg	0.2576	2.94%
Cu 327.393†	121.4	1.682 ug/L	0.6207	3.298 mg/kg	1.2170	36.90%
Fe 273.955†	73132.3	4179 ug/L	56.5	8194 mg/kg	110.9	1.35%
K 766.490†	283.9	107.1 ug/L	79.47	210.0 mg/kg	155.83	74.21%
Mg 285.213†	1354.0	177.7 ug/L	2.10	348.4 mg/kg	4.12	1.18%
Mn 257.610†	257.2	21.18 ug/L	0.183	41.54 mg/kg	0.360	0.87%
Mo 202.031†	6.7	0.465 ug/L	0.1578	0.913 mg/kg	0.3094	33.90%
Na 589.592†	189.0	5.491 ug/L	21.7574	10.77 mg/kg	42.661	396.20%
Ni 231.604†	47.2	1.236 ug/L	0.2138	2.424 mg/kg	0.4192	17.29%
P 213.617†	227.4	60.37 ug/L	1.208	118.4 mg/kg	2.37	2.00%
Pb 220.353†	88.5	8.674 ug/L	0.5182	17.01 mg/kg	1.016	5.97%
Sb 206.836†	0.1	0.012 ug/L	1.2137	0.024 mg/kg	2.3799	>999.9%
Se 196.026†	2.2	0.682 ug/L	1.8907	1.338 mg/kg	3.7073	277.16%
Sn 189.927†	-9.5	-0.600 ug/L	0.3899	-1.176 mg/kg	0.7645	65.02%
Sr 421.552†	675.5	1.458 ug/L	0.1686	2.859 mg/kg	0.3305	11.56%
Ti 337.279†	1340.9	50.36 ug/L	0.755	98.75 mg/kg	1.481	1.50%
Tl 190.801†	1.8	0.371 ug/L	0.2746	0.727 mg/kg	0.5385	74.10%
V 292.402†	1472.8	7.947 ug/L	0.1369	15.58 mg/kg	0.268	1.72%
Zn 206.200†	538.7	15.11 ug/L	0.132	29.63 mg/kg	0.259	0.87%
Li 670.784	24809.4	1.882 ug/L	0.0220	3.689 mg/kg	0.0431	1.17%

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS50-0006P
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24397

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 15.3 Percent Moisture.)									
6010C/3050B	ALUMINUM (AL)	7140	1180.0	94.00	47.00	mg/Kg	20	11/23/15	11/24/15
6010C/3050B	BORON (B)	4.70 U	5.9	4.70	1.80	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	LITHIUM (LI)	6.4	0.79	0.590	0.300	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	ZINC (ZN)	22.2	9.4	4.70	1.40	mg/Kg	1	11/23/15	11/24/15

Printed: 12/01/15 11:01:25 AM

?L-F1-SC-MCRes/MCPQL-REG MDLs

Sequence No.: 39
 Sample ID: AZ24397S01
 Analyst: RJS
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt: 1.05 g
 Dilution:

Autosampler Location: 65
 Date Collected: 11/24/15 2:22:26 PM
 Data Type: Reprocessed on 11/25/15 9:11:25 AM
 Initial Sample Vol:
 Sample Prep Vol: 100 mL

Mean Data: AZ24397S01

Analyte	Mean Corrected Intensity	Calib.	Sample		
	Conc. Units	Std.Dev.	Conc. Units	Std.Dev.	RSD
Y 371.029	828647.8	104.4 %	0.97		0.92%
Y 371.029 Radial	760175.2	104.2 %	1.04		1.00%
Ag 338.289†	-665.5	-6.224 ug/L	0.3741	-0.593 mg/kg	0.0356 6.01%
Al 308.215†	36474.8	58610 ug/L	1188.0	5581 mg/kg	113.1 2.03%
As 188.979†	48.5	16.01 ug/L	0.576	1.524 mg/kg	0.0549 3.60%
B†	480.7	11.12 ug/L	0.663	1.059 mg/kg	0.0631 5.96%
Ba 233.527†	41239.5	302.0 ug/L	2.97	28.76 mg/kg	0.283 0.98%
Be 313.107†	535.4	2.464 ug/L	0.0656	0.235 mg/kg	0.0062 2.66%
Ca 315.887†	15592.6	3820 ug/L	84.6	363.8 mg/kg	8.06 2.22%
Cd 214.440†	900.5	-0.036 ug/L	0.0757	-0.003 mg/kg	0.0072 208.08%
Co 228.616†	1275.2	18.15 ug/L	0.653	1.728 mg/kg	0.0622 3.60%
Cr 267.716†	8964.3	107.2 ug/L	0.75	10.21 mg/kg	0.071 0.70%
Cu 327.393†	2401.3	33.91 ug/L	1.335	3.230 mg/kg	0.1272 3.94%
Fe 273.955†	1542788.3	88150 ug/L	404.8	8396 mg/kg	38.6 0.46%
K 766.490†	7588.5	2874 ug/L	76.6	273.7 mg/kg	7.29 2.66%
Mg 285.213†	29889.2	3917 ug/L	69.8	373.0 mg/kg	6.65 1.78%
Mn 257.610†	5223.4	430.5 ug/L	11.06	41.00 mg/kg	1.053 2.57%
Mo 202.031†	-7.7	4.564 ug/L	0.2791	0.435 mg/kg	0.0266 6.12%
Na 589.592†	2033.0	-164.7 ug/L	9.97	-15.69 mg/kg	0.949 6.05%
Ni 231.604†	1057.6	27.51 ug/L	1.072	2.620 mg/kg	0.1021 3.90%
P 213.617†	4944.3	1313 ug/L	30.3	125.0 mg/kg	2.89 2.31%
Pb 220.353†	1801.5	177.7 ug/L	2.31	16.93 mg/kg	0.220 1.30%
Sb 206.836†	0.4	0.086 ug/L	1.6593	0.008 mg/kg	0.1580 >999.9%
Se 196.026†	37.5	11.87 ug/L	1.698	1.130 mg/kg	0.1617 14.31%
Sn 189.927†	-8.6	7.044 ug/L	0.8804	0.671 mg/kg	0.0838 12.50%
Sr 421.552†	13076.3	28.25 ug/L	0.770	2.691 mg/kg	0.0733 2.72%
Ti 337.279†	31374.4	1178 ug/L	24.5	112.2 mg/kg	2.33 2.08%
Tl 190.801†	-3.9	-0.806 ug/L	1.1385	-0.077 mg/kg	0.1084 141.29%
V 292.402†	31426.8	169.7 ug/L	1.73	16.17 mg/kg	0.165 1.02%
Zn 206.200†	7179.9	197.5 ug/L	4.33	18.81 mg/kg	0.412 2.19%
Li 670.784	746074.9	56.58 ug/L	1.136	5.389 mg/kg	0.1082 2.01%

Sequence No.: 21
 Sample ID: AZ24397S01-1/20
 Analyst: RJS
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt: 1.05 g
 Dilution: 20X

Autosampler Location: 51
 Date Collected: 11/24/15 12:59:33 PM
 Data Type: Reprocessed on 11/25/15 9:11:00 AM
 Initial Sample Vol:
 Sample Prep Vol: 100 mL

Mean Data: AZ24397S01-1/20

Analyte	Mean Corrected		Calib.	Std.Dev.	Sample		RSD
	Intensity	Conc. Units			Conc. Units	Std.Dev.	
Y 371.029	805476.8	101.5 %	0.83				0.82%
Y 371.029 Radial	740966.6	101.6 %	0.96				0.94%
Ag 338.289†	-35.6	-0.333 ug/L	0.4949	-0.634 mg/kg	0.9427	148.61%	
Al 308.215†	1975.9	3175 ug/L	32.2	6047 mg/kg	61.3	1.01%	
As 188.979†	2.4	0.783 ug/L	0.1724	1.492 mg/kg	0.3283	22.01%	
Bt	55.9	1.294 ug/L	0.1628	2.465 mg/kg	0.3102	12.58%	
Ba 233.527†	2325.6	17.03 ug/L	0.263	32.43 mg/kg	0.501	1.54%	
Be 313.107†	35.1	0.161 ug/L	0.0011	0.307 mg/kg	0.0022	0.71%	
Ca 315.887†	830.6	203.5 ug/L	1.85	387.5 mg/kg	3.52	0.91%	
Cd 214.440†	48.3	-0.018 ug/L	0.1293	-0.034 mg/kg	0.2463	715.59%	
Co 228.616†	75.3	1.095 ug/L	0.1137	2.087 mg/kg	0.2166	10.38%	
Cr 267.716†	516.4	6.176 ug/L	0.1553	11.76 mg/kg	0.296	2.51%	
Cu 327.393†	60.0	1.200 ug/L	0.3948	2.286 mg/kg	0.7520	32.90%	
Fe 273.955†	87291.9	4988 ug/L	28.7	9501 mg/kg	54.6	0.57%	
K 766.490†	421.7	159.7 ug/L	26.44	304.2 mg/kg	50.37	16.56%	
Mg 285.213†	1652.7	216.7 ug/L	2.71	412.8 mg/kg	5.17	1.25%	
Mn 257.610†	286.6	23.64 ug/L	0.329	45.02 mg/kg	0.626	1.39%	
Mo 202.031†	0.2	0.282 ug/L	0.1628	0.538 mg/kg	0.3100	57.63%	
Na 589.592†	161.7	-2.654 ug/L	7.0597	-5.056 mg/kg	13.4470	265.96%	
Ni 231.604†	56.8	1.488 ug/L	0.5429	2.834 mg/kg	1.0341	36.49%	
P 213.617†	260.6	69.19 ug/L	0.329	131.8 mg/kg	0.63	0.48%	
Pb 220.353†	85.5	8.475 ug/L	2.0292	16.14 mg/kg	3.865	23.94%	
Sb 206.836†	-1.3	-0.297 ug/L	0.4885	-0.566 mg/kg	0.9305	164.44%	
Se 196.026†	9.2	2.912 ug/L	0.7321	5.547 mg/kg	1.3945	25.14%	
Sn 189.927†	-7.7	-0.343 ug/L	0.3848	-0.654 mg/kg	0.7329	112.02%	
Sr 421.552†	867.5	1.876 ug/L	0.0579	3.573 mg/kg	0.1103	3.09%	
Ti 337.279†	1681.2	63.14 ug/L	0.315	120.3 mg/kg	0.60	0.50%	
Tl 190.801†	1.3	0.266 ug/L	0.6911	0.506 mg/kg	1.3164	260.00%	
V 292.402†	1853.7	10.06 ug/L	0.866	19.17 mg/kg	1.649	8.60%	
Zn 206.200†	445.9	12.34 ug/L	0.450	23.50 mg/kg	0.857	3.65%	
Li 670.784	32019.9	2.428 ug/L	0.0223	4.626 mg/kg	0.0425	0.92%	

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SB50-1618
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24398

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 21.2 Percent Moisture.)									
6010C/3050B	ALUMINUM (AL)	3320	63.0	5.10	2.50	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	BORON (B)	5.10 U	6.3	5.10	2.00	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	LITHIUM (LI)	1.8	0.85	0.630	0.320	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	ZINC (ZN)	35.5	10.0	5.10	1.50	mg/Kg	1	11/23/15	11/24/15

Printed: 12/01/15 11:01:25 AM

>L-F1-SC-MCRes/MCPQL-REG MDLs

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Sequence No.: 40
Sample ID: AZ24398S01
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.98 g
Dilution:

Autosampler Location: 66
Date Collected: 11/24/15 2:26:45 PM
Data Type: Reprocessed on 11/25/15 9:11:27 AM

Initial Sample Vol:
Sample Prep Vol: 100 mL

Mean Data: AZ24398S01

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	1588257.7	200.1 %	1.99			1.00%
Y 371.029 Radial	148598.3	203.6 %	2.16			1.06%
Ag 338.289†	-1194.1	-11.17 ug/L	0.414	-1.140 mg/kg	0.0422	3.70%
Al 308.215†	15987.9	25690 ug/L	149.3	2622 mg/kg	15.2	0.58%
As 188.979†	39.5	13.04 ug/L	0.310	1.331 mg/kg	0.0316	2.37%
B†	-86.2	-1.995 ug/L	1.8350	-0.204 mg/kg	0.1872	91.96%
Ba 233.527†	28400.9	189.4 ug/L	1.36	19.33 mg/kg	0.138	0.72%
Be 313.107†	2289.8	10.54 ug/L	0.108	1.075 mg/kg	0.0110	1.02%
Ca 315.887†	21298.5	5219 ug/L	47.5	532.6 mg/kg	4.85	0.91%
Cd 214.440†	2098.5	0.794 ug/L	0.1694	0.081 mg/kg	0.0173	21.34%
Co 228.616†	4023.7	68.41 ug/L	0.635	6.980 mg/kg	0.0648	0.93%
Cr 267.716†	4309.5	55.25 ug/L	0.594	5.638 mg/kg	0.0606	1.08%
Cu 327.393†	5685.4	77.46 ug/L	0.710	7.904 mg/kg	0.0724	0.92%
Fe 273.955†	2804838.4	160300 ug/L	256.6	16350 mg/kg	26.2	0.16%
K 766.490†	13178.8	4993 ug/L	68.5	509.4 mg/kg	6.99	1.37%
Mg 285.213†	42058.9	5562 ug/L	43.5	567.6 mg/kg	4.44	0.78%
Mn 257.610†	2960.6	251.3 ug/L	1.09	25.64 mg/kg	0.111	0.43%
Mo 202.031†	-315.6	-1.004 ug/L	0.0417	-0.102 mg/kg	0.0043	4.15%
Na 589.592†	1885.5	-570.1 ug/L	5.50	-58.17 mg/kg	0.561	0.96%
Ni 231.604†	3728.0	96.80 ug/L	0.579	9.877 mg/kg	0.0590	0.60%
P 213.617†	12099.9	3212 ug/L	41.7	327.8 mg/kg	4.26	1.30%
Pb 220.353†	664.1	60.34 ug/L	1.574	6.157 mg/kg	0.1607	2.61%
Sb 206.836†	-3.1	-0.737 ug/L	0.6559	-0.075 mg/kg	0.0669	88.96%
Se 196.026†	48.2	15.22 ug/L	1.244	1.553 mg/kg	0.1269	8.17%
Sn 189.927†	-41.9	4.370 ug/L	0.1569	0.446 mg/kg	0.0160	3.59%
Sr 421.552†	22151.3	47.86 ug/L	0.492	4.884 mg/kg	0.0502	1.03%
Ti 337.279†	27830.5	1045 ug/L	9.2	106.6 mg/kg	0.94	0.88%
Tl 190.801†	-5.5	-1.128 ug/L	0.2601	-0.115 mg/kg	0.0265	23.07%
V 292.402†	42781.6	221.6 ug/L	2.37	22.61 mg/kg	0.242	1.07%
Zn 206.200†	10021.7	274.4 ug/L	2.81	28.00 mg/kg	0.287	1.02%
Li 670.784	179194.7	13.59 ug/L	0.175	1.387 mg/kg	0.0179	1.29%

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS51-0006
Sample Collection Date: 11/09/15

ARF: 77838
APPL ID: AZ24399

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 23.6 Percent Moisture.)									
6010C/3050B	ALUMINUM (AL)	13400	1310.0	105.00	52.00	mg/Kg	20	11/23/15	11/24/15
6010C/3050B	BORON (B)	5.20 U	6.5	5.20	2.00	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	LITHIUM (LI)	7.3	0.88	0.650	0.330	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	ZINC (ZN)	27.4	10.0	5.20	1.50	mg/Kg	1	11/23/15	11/24/15

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Sequence No.: 41
Sample ID: AZ24399S01
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 0.97 g
Dilution:

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Autosampler Location: 67
Date Collected: 11/24/15 2:31:05 PM
Data Type: Reprocessed on 11/25/15 9:11:28 AM
Initial Sample Vol:
Sample Prep Vol: 100 mL

Mean Data: AZ24399S01

Analyte	Mean Corrected		Calib.	Std.Dev.	Sample		RSD
	Intensity	Conc. Units			Conc. Units	Std.Dev.	
Y 371.029	839453.7	105.8 %	1.42				1.34%
Y 371.029 Radial	770843.5	105.7 %	1.52				1.44%
Ag 338.289†	-621.5	-5.812 ug/L	0.1466	-0.599 mg/kg	0.0151	2.52%	
Al 308.215†	53499.9	85970 ug/L	1881.1	8863 mg/kg	193.9	2.19%	
As 188.979†	116.3	38.39 ug/L	1.580	3.958 mg/kg	0.1629	4.12%	
B†	315.7	7.305 ug/L	1.9963	0.753 mg/kg	0.2058	27.33%	
Ba 233.527†	28844.9	190.2 ug/L	2.89	19.60 mg/kg	0.298	1.52%	
Be 313.107†	409.2	1.883 ug/L	0.0060	0.194 mg/kg	0.0006	0.32%	
Ca 315.887†	12767.5	3123 ug/L	65.6	321.9 mg/kg	6.76	2.10%	
Cd 214.440†	2003.1	0.485 ug/L	0.0487	0.050 mg/kg	0.0050	10.04%	
Co 228.616†	1113.4	12.36 ug/L	0.445	1.274 mg/kg	0.0459	3.60%	
Cr 267.716†	11551.6	140.4 ug/L	2.75	14.48 mg/kg	0.284	1.96%	
Cu 327.393†	39422.0	397.7 ug/L	5.86	41.00 mg/kg	0.604	1.47%	
Fe 273.955†	3066042.3	175200 ug/L	2151.5	18060 mg/kg	221.8	1.23%	
K 766.490†	13845.7	5240 ug/L	74.9	540.2 mg/kg	7.72	1.43%	
Mg 285.213†	26123.6	3549 ug/L	70.0	365.9 mg/kg	7.22	1.97%	
Mn 257.610†	2625.8	225.1 ug/L	3.58	23.21 mg/kg	0.369	1.59%	
Mo 202.031†	-97.7	6.736 ug/L	1.3686	0.694 mg/kg	0.1411	20.32%	
Na 589.592†	2234.5	-592.6 ug/L	12.73	-61.09 mg/kg	1.312	2.15%	
Ni 231.604†	1132.8	33.75 ug/L	0.184	3.480 mg/kg	0.0189	0.54%	
P 213.617†	10753.3	2855 ug/L	36.4	294.3 mg/kg	3.75	1.28%	
Pb 220.353†	2908.4	284.1 ug/L	3.56	29.29 mg/kg	0.367	1.25%	
Sb 206.836†	3.4	0.807 ug/L	1.2930	0.083 mg/kg	0.1333	160.25%	
Se 196.026†	71.7	22.65 ug/L	2.331	2.335 mg/kg	0.2403	10.29%	
Sn 189.927†	45.4	12.89 ug/L	0.907	1.329 mg/kg	0.0935	7.03%	
Sr 421.552†	15449.7	33.30 ug/L	0.958	3.433 mg/kg	0.0988	2.88%	
Ti 337.279†	29536.1	1109 ug/L	23.6	114.3 mg/kg	2.43	2.13%	
Tl 190.801†	2.5	0.507 ug/L	1.0127	0.052 mg/kg	0.1044	199.76%	
V 292.402†	71209.2	390.1 ug/L	5.62	40.22 mg/kg	0.579	1.44%	
Zn 206.200†	7585.1	202.6 ug/L	2.17	20.88 mg/kg	0.224	1.07%	
Li 670.784	717317.7	54.40 ug/L	0.622	5.608 mg/kg	0.0641	1.14%	

Sequence No.: 23
 Sample ID: AZ24399S01-1/20
 Analyst: RJS
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt: 0.97 g
 Dilution: 20X

Autosampler Location: 53
 Date Collected: 11/24/15 1:08:06 PM
 Data Type: Reprocessed on 11/25/15 9:11:03 AM

Initial Sample Vol:
 Sample Prep Vol: 100 mL

Mean Data: AZ24399S01-1/20

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	806741.2	101.7 %	0.46			0.45%
Y 371.029 Radial	742714.3	101.8 %	0.56			0.55%
Ag 338.289†	-39.7	-0.371 ug/L	0.4053	-0.765 mg/kg	0.8357	109.29%
Al 308.215†	3076.2	4943 ug/L	48.2	10190 mg/kg	99.3	0.97%
As 188.979†	3.4	1.129 ug/L	0.7178	2.328 mg/kg	1.4801	63.58%
B†	65.3	1.512 ug/L	0.1437	3.117 mg/kg	0.2963	9.51%
Ba 233.527†	1641.8	10.76 ug/L	0.302	22.18 mg/kg	0.622	2.80%
Be 313.107†	32.4	0.149 ug/L	0.0157	0.308 mg/kg	0.0324	10.55%
Ca 315.887†	730.8	178.7 ug/L	0.86	368.5 mg/kg	1.78	0.48%
Cd 214.440†	113.3	0.001 ug/L	0.0210	0.003 mg/kg	0.0433	>999.9%
Co 228.616†	52.2	0.483 ug/L	0.0590	0.997 mg/kg	0.1217	12.21%
Cr 267.716†	662.9	8.069 ug/L	0.0848	16.64 mg/kg	0.175	1.05%
Cu 327.393†	2080.5	21.13 ug/L	0.533	43.57 mg/kg	1.100	2.52%
Fe 273.955†	180953.3	10340 ug/L	252.7	21320 mg/kg	521.0	2.44%
K 766.490†	797.0	301.5 ug/L	41.48	621.7 mg/kg	85.53	13.76%
Mg 285.213†	1537.5	208.9 ug/L	3.89	430.8 mg/kg	8.02	1.86%
Mn 257.610†	153.2	13.15 ug/L	0.330	27.10 mg/kg	0.681	2.51%
Mo 202.031†	-0.4	0.587 ug/L	0.2133	1.211 mg/kg	0.4397	36.30%
Na 589.592†	121.2	-36.52 ug/L	10.837	-75.29 mg/kg	22.344	29.68%
Ni 231.604†	51.2	1.617 ug/L	0.2375	3.334 mg/kg	0.4897	14.69%
P 213.617†	582.3	154.6 ug/L	4.13	318.7 mg/kg	8.51	2.67%
Pb 220.353†	148.4	14.54 ug/L	1.451	29.98 mg/kg	2.992	9.98%
Sb 206.836†	-0.1	-0.025 ug/L	0.8168	-0.052 mg/kg	1.6841	>999.9%
Se 196.026†	4.6	1.461 ug/L	0.3808	3.013 mg/kg	0.7852	26.06%
Sn 189.927†	0.3	0.509 ug/L	0.6438	1.049 mg/kg	1.3275	126.60%
Sr 421.552†	1056.5	2.280 ug/L	0.2025	4.701 mg/kg	0.4175	8.88%
Ti 337.279†	1682.0	63.15 ug/L	0.513	130.2 mg/kg	1.06	0.81%
Tl 190.801†	-0.9	-0.192 ug/L	0.3437	-0.397 mg/kg	0.7088	178.70%
V 292.402†	4110.7	22.47 ug/L	0.547	46.34 mg/kg	1.128	2.43%
Zn 206.200†	449.8	12.02 ug/L	0.476	24.78 mg/kg	0.982	3.96%
Li 670.784	31562.5	2.394 ug/L	0.0527	4.936 mg/kg	0.1086	2.20%

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS52-0006
Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24400

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 19.0 Percent Moisture.)									
6010C/3050B	ALUMINUM (AL)	7160	1230.0	99.00	49.00	mg/Kg	20	11/23/15	11/24/15
6010C/3050B	BORON (B)	4.90 U	6.2	4.90	1.90	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	LITHIUM (LI)	5.3	0.83	0.620	0.310	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	ZINC (ZN)	25.9	9.9	4.90	1.40	mg/Kg	1	11/23/15	11/24/15

Printed: 12/01/15 11:01:25 AM

?L-F1-SC-MCRes/MCPQL-REG MDLs

Sequence No.: 42
Sample ID: AZ24400S01
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 1.06 g
Dilution:

Autosampler Location: 68
Date Collected: 11/24/15 2:35:23 PM
Data Type: Reprocessed on 11/25/15 9:11:30 AM

Mean Data: AZ24400S01

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
Y 371.029	816610.5	102.9	%	1.03				1.00%
Y 371.029 Radial	748555.5	102.6	%	1.11				1.08%
Ag 338.289†	-595.1	-5.566	ug/L	0.1604	-0.525	mg/kg	0.0151	2.88%
Al 308.215†	36958.9	59390	ug/L	472.8	5602	mg/kg	44.6	0.80%
As 188.979†	2318.4	765.2	ug/L	11.49	72.19	mg/kg	1.084	1.50%
B†	295.6	6.839	ug/L	0.3507	0.645	mg/kg	0.0331	5.13%
Ba 233.527†	32993.0	236.4	ug/L	3.29	22.30	mg/kg	0.310	1.39%
Be 313.107†	432.4	1.990	ug/L	0.0586	0.188	mg/kg	0.0055	2.94%
Ca 315.887†	16670.8	4084	ug/L	43.1	385.3	mg/kg	4.07	1.06%
Cd 214.440†	1151.1	0.570	ug/L	0.0406	0.054	mg/kg	0.0038	7.13%
Co 228.616†	1211.6	16.33	ug/L	0.068	1.541	mg/kg	0.0065	0.42%
Cr 267.716†	9572.2	114.6	ug/L	1.84	10.81	mg/kg	0.174	1.61%
Cu 327.393†	14799.7	153.6	ug/L	2.12	14.49	mg/kg	0.200	1.38%
Fe 273.955†	1730547.2	98880	ug/L	1518.0	9328	mg/kg	143.2	1.54%
K 766.490†	8177.1	3096	ug/L	17.4	292.1	mg/kg	1.64	0.56%
Mg 285.213†	28486.9	3752	ug/L	38.9	354.0	mg/kg	3.67	1.04%
Mn 257.610†	4810.2	397.7	ug/L	1.44	37.51	mg/kg	0.136	0.36%
Mo 202.031†	-16.5	4.945	ug/L	0.3456	0.467	mg/kg	0.0326	6.99%
Na 589.592†	1785.8	-256.5	ug/L	9.93	-24.20	mg/kg	0.937	3.87%
Ni 231.604†	1370.0	35.48	ug/L	0.513	3.347	mg/kg	0.0484	1.45%
P 213.617†	6806.1	1807	ug/L	25.2	170.5	mg/kg	2.38	1.40%
Pb 220.353†	13042.6	1244	ug/L	17.3	117.4	mg/kg	1.63	1.39%
Sb 206.836†	43.6	10.23	ug/L	1.879	0.965	mg/kg	0.1772	18.37%
Se 196.026†	39.9	12.61	ug/L	1.074	1.190	mg/kg	0.1013	8.51%
Sn 189.927†	22.1	10.91	ug/L	0.513	1.029	mg/kg	0.0484	4.71%
Sr 421.552†	13732.2	29.66	ug/L	0.404	2.798	mg/kg	0.0381	1.36%
Ti 337.279†	34148.1	1283	ug/L	14.0	121.0	mg/kg	1.33	1.10%
Tl 190.801†	-1.5	-0.314	ug/L	0.9748	-0.030	mg/kg	0.0920	310.24%
V 292.402†	40359.6	221.1	ug/L	3.88	20.86	mg/kg	0.366	1.75%
Zn 206.200†	8065.0	222.6	ug/L	2.78	21.00	mg/kg	0.262	1.25%
Li 670.784	602522.9	45.70	ug/L	0.205	4.311	mg/kg	0.0193	0.45%

Sequence No.: 24
Sample ID: AZ24400S01-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 1.06 g
Dilution: 20X

Autosampler Location: 54
Date Collected: 11/24/15 1:12:20 PM
Data Type: Reprocessed on 11/25/15 9:11:04 AM

Initial Sample Vol:
Sample Prep Vol: 100 mL

Mean Data: AZ24400S01-1/20

Analyte	Mean	Corrected	Calib.		Sample			Std.Dev.	RSD
	Intensity		Conc.	Units	Std.Dev.	Conc.	Units		
Y 371.029	804362.9	101.4	%		1.01				1.00%
Y 371.029 Radial	740787.2	101.5	%		1.17				1.15%
Ag 338.289†	-29.3	-0.274	ug/L		0.1628	-0.516	mg/kg	0.3072	59.50%
Al 308.215†	1911.4	3071	ug/L		26.5	5795	mg/kg	50.1	0.86%
As 188.979†	121.3	40.04	ug/L		0.718	75.54	mg/kg	1.355	1.79%
B†	41.9	0.970	ug/L		0.0979	1.831	mg/kg	0.1847	10.09%
Ba 233.527†	1809.5	12.95	ug/L		0.126	24.42	mg/kg	0.238	0.97%
Be 313.107†	27.2	0.125	ug/L		0.0075	0.236	mg/kg	0.0141	5.95%
Ca 315.887†	857.0	209.9	ug/L		0.45	396.1	mg/kg	0.85	0.21%
Cd 214.440†	60.2	0.007	ug/L		0.0451	0.014	mg/kg	0.0851	628.98%
Co 228.616†	60.3	0.790	ug/L		0.2494	1.490	mg/kg	0.4706	31.57%
Cr 267.716†	505.0	6.056	ug/L		0.2658	11.43	mg/kg	0.502	4.39%
Cu 327.393†	735.4	7.720	ug/L		0.7282	14.57	mg/kg	1.374	9.43%
Fe 273.955†	96544.7	5516	ug/L		81.8	10410	mg/kg	154.3	1.48%
K 766.490†	479.4	181.6	ug/L		41.29	342.7	mg/kg	77.91	22.73%
Mg 285.213†	1509.7	199.2	ug/L		3.28	375.9	mg/kg	6.18	1.64%
Mn 257.610†	249.0	20.61	ug/L		0.339	38.89	mg/kg	0.640	1.65%
Mo 202.031†	4.6	0.472	ug/L		0.2119	0.891	mg/kg	0.3999	44.88%
Na 589.592†	164.2	-5.109	ug/L		8.2847	-9.640	mg/kg	15.6316	162.15%
Ni 231.604†	56.9	1.518	ug/L		0.1706	2.864	mg/kg	0.3219	11.24%
P 213.617†	347.6	92.28	ug/L		1.451	174.1	mg/kg	2.74	1.57%
Pb 220.353†	704.0	67.13	ug/L		1.123	126.7	mg/kg	2.12	1.67%
Sb 206.836†	3.4	0.804	ug/L		0.9270	1.518	mg/kg	1.7491	115.24%
Se 196.026†	6.5	2.046	ug/L		3.9645	3.861	mg/kg	7.4802	193.73%
Sn 189.927†	-6.3	-0.180	ug/L		0.1561	-0.339	mg/kg	0.2945	86.77%
Sr 421.552†	739.5	1.597	ug/L		0.1812	3.013	mg/kg	0.3419	11.35%
Ti 337.279†	1755.1	65.92	ug/L		0.237	124.4	mg/kg	0.45	0.36%
Tl 190.801†	-0.9	-0.183	ug/L		0.7114	-0.345	mg/kg	1.3422	388.97%
V 292.402†	2194.3	11.99	ug/L		0.519	22.63	mg/kg	0.979	4.33%
Zn 206.200†	447.6	12.36	ug/L		0.344	23.32	mg/kg	0.648	2.78%
Li 670.784	26154.3	1.984	ug/L		0.0332	3.743	mg/kg	0.0626	1.67%

Metals Analysis

Tetra Tech
5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Ed Corack
Project: CTO JU11 112G02622 NSF Indian Head
Sample ID: S67-SS53-0006
Sample Collection Date: 11/10/15

ARF: 77838
APPL ID: AZ24401

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
(Solid Concentrations and Limits have been adjusted to reflect 18.6 Percent Moisture.)									
6010C/3050B	ALUMINUM (AL)	10900	1230.0	98.00	49.00	mg/Kg	20	11/23/15	11/24/15
6010C/3050B	BORON (B)	26.2	6.1	4.90	1.90	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	LITHIUM (LI)	8.7	0.82	0.610	0.310	mg/Kg	1	11/23/15	11/24/15
6010C/3050B	ZINC (ZN)	35.1	9.8	4.90	1.40	mg/Kg	1	11/23/15	11/24/15

Printed: 12/01/15 11:01:25 AM

?L-F1-SC-MCRes/MCPQL-REG MDLs

=====
Sequence No.: 43
Sample ID: AZ24401S01
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 1.03 g
Dilution:

=====
Autosampler Location: 69
Date Collected: 11/24/15 2:39:36 PM
Data Type: Reprocessed on 11/25/15 9:11:32 AM
Initial Sample Vol:
Sample Prep Vol: 100 mL

Mean Data: AZ24401S01

Analyte	Mean Corrected Intensity	Calib.	Sample		
	Conc. Units	Std.Dev.	Conc. Units	Std.Dev.	RSD
Y 371.029	816945.3	102.9 %	0.93		0.91%
Y 371.029 Radial	748069.8	102.5 %	0.99		0.97%
Ag 338.289†	-834.0	-7.800 ug/L	0.3571	-0.757 mg/kg	0.0347 4.58%
Al 308.215†	55333.1	88900 ug/L	2338.4	8632 mg/kg	227.0 2.63%
As 188.979†	125.7	41.49 ug/L	1.868	4.028 mg/kg	0.1814 4.50%
B†	9500.7	219.8 ug/L	1.67	21.34 mg/kg	0.162 0.76%
Ba 233.527†	32187.0	216.9 ug/L	4.10	21.05 mg/kg	0.398 1.89%
Be 313.107†	1361.8	6.266 ug/L	0.1922	0.608 mg/kg	0.0187 3.07%
Ca 315.887†	50162.0	12290 ug/L	325.1	1194 mg/kg	31.6 2.64%
Cd 214.440†	2836.7	5.173 ug/L	0.2075	0.502 mg/kg	0.0201 4.01%
Co 228.616†	1680.1	22.54 ug/L	0.443	2.188 mg/kg	0.0430 1.96%
Cr 267.716†	27570.3	327.5 ug/L	4.78	31.79 mg/kg	0.464 1.46%
Cu 327.393†	3675.7	56.16 ug/L	0.942	5.453 mg/kg	0.0915 1.68%
Fe 273.955†	2969974.3	169700 ug/L	2024.0	16480 mg/kg	196.5 1.19%
K 766.490†	72425.4	27730 ug/L	437.0	2692 mg/kg	42.4 1.58%
Mg 285.213†	136509.5	17600 ug/L	275.7	1708 mg/kg	26.8 1.57%
Mn 257.610†	6198.2	514.7 ug/L	14.77	49.97 mg/kg	1.434 2.87%
Mo 202.031†	147.3	14.53 ug/L	1.177	1.411 mg/kg	0.1143 8.10%
Na 589.592†	4706.4	-213.6 ug/L	15.49	-20.74 mg/kg	1.504 7.25%
Ni 231.604†	1522.0	42.35 ug/L	0.679	4.111 mg/kg	0.0659 1.60%
P 213.617†	8380.9	2225 ug/L	30.0	216.0 mg/kg	2.91 1.35%
Pb 220.353†	1367.1	138.7 ug/L	2.77	13.47 mg/kg	0.269 1.99%
Sb 206.836†	11.6	2.731 ug/L	0.1633	0.265 mg/kg	0.0159 5.98%
Se 196.026†	61.1	19.31 ug/L	2.368	1.875 mg/kg	0.2299 12.26%
Sn 189.927†	-13.3	8.598 ug/L	0.5067	0.835 mg/kg	0.0492 5.89%
Sr 421.552†	26762.7	57.80 ug/L	0.747	5.612 mg/kg	0.0725 1.29%
Ti 337.279†	35312.5	1326 ug/L	35.8	128.7 mg/kg	3.47 2.70%
Tl 190.801†	-3.0	-0.612 ug/L	0.6868	-0.059 mg/kg	0.0667 112.20%
V 292.402†	55621.7	299.0 ug/L	5.52	29.03 mg/kg	0.536 1.85%
Zn 206.200†	10755.1	295.1 ug/L	2.22	28.65 mg/kg	0.215 0.75%
Li 670.784	968113.8	73.42 ug/L	0.598	7.128 mg/kg	0.0580 0.81%

=====
Sequence No.: 25 Autosampler Location: 55
Sample ID: AZ24401S01-1/20 Date Collected: 11/24/15 1:16:37 PM
Analyst: RJS Data Type: Reprocessed on 11/25/15 9:11:05 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 1.03 g Initial Sample Vol:
Dilution: 20X Sample Prep Vol: 100 mL

Mean Data: AZ24401S01-1/20

Analyte	Mean Corrected		Calib.	Sample			RSD
	Intensity	Conc. Units		Conc.	Units	Std.Dev.	
Y 371.029	806192.3	101.6 %	0.96				0.94%
Y 371.029 Radial	741592.7	101.6 %	1.11				1.10%
Ag 338.289†	-45.4	-0.425 ug/L	0.1055	-0.825	mg/kg	0.2049	24.84%
Al 308.215†	2851.6	4582 ug/L	56.4	8897	mg/kg	109.5	1.23%
As 188.979†	3.7	1.232 ug/L	0.7507	2.393	mg/kg	1.4577	60.92%
B†	551.2	12.75 ug/L	0.076	24.76	mg/kg	0.148	0.60%
Ba 233.527†	1773.1	11.92 ug/L	0.184	23.15	mg/kg	0.356	1.54%
Be 313.107†	72.7	0.335 ug/L	0.0148	0.650	mg/kg	0.0288	4.43%
Ca 315.887†	2569.1	629.7 ug/L	6.27	1223	mg/kg	12.2	1.00%
Cd 214.440†	161.7	0.298 ug/L	0.0691	0.579	mg/kg	0.1342	23.15%
Co 228.616†	91.2	1.228 ug/L	0.0781	2.384	mg/kg	0.1516	6.36%
Cr 267.716†	1527.3	18.15 ug/L	0.349	35.24	mg/kg	0.678	1.92%
Cu 327.393†	190.1	3.009 ug/L	0.2725	5.843	mg/kg	0.5292	9.06%
Fe 273.955†	166077.9	9489 ug/L	2.5	18430	mg/kg	4.9	0.03%
K 766.490†	3731.1	1428 ug/L	111.1	2774	mg/kg	215.7	7.78%
Mg 285.213†	7401.4	954.4 ug/L	9.42	1853	mg/kg	18.3	0.99%
Mn 257.610†	323.8	26.93 ug/L	0.592	52.30	mg/kg	1.150	2.20%
Mo 202.031†	13.0	0.986 ug/L	0.1563	1.914	mg/kg	0.3034	15.85%
Na 589.592†	329.1	-2.519 ug/L	9.4812	-4.891	mg/kg	18.4101	376.43%
Ni 231.604†	77.3	2.194 ug/L	0.1586	4.260	mg/kg	0.3080	7.23%
P 213.617†	424.3	112.6 ug/L	0.79	218.7	mg/kg	1.53	0.70%
Pb 220.353†	61.1	6.234 ug/L	0.6537	12.11	mg/kg	1.269	10.49%
Sb 206.836†	1.6	0.365 ug/L	0.8530	0.708	mg/kg	1.6563	233.82%
Se 196.026†	3.9	1.239 ug/L	2.5474	2.406	mg/kg	4.9464	205.56%
Sn 189.927†	-11.1	-0.595 ug/L	0.0692	-1.154	mg/kg	0.1343	11.64%
Sr 421.552†	1498.5	3.237 ug/L	0.0454	6.285	mg/kg	0.0881	1.40%
Ti 337.279†	1791.0	67.24 ug/L	0.727	130.6	mg/kg	1.41	1.08%
Tl 190.801†	1.1	0.221 ug/L	0.8428	0.428	mg/kg	1.6365	381.95%
V 292.402†	3110.5	16.73 ug/L	0.176	32.48	mg/kg	0.342	1.05%
Zn 206.200†	598.5	16.43 ug/L	0.068	31.91	mg/kg	0.131	0.41%
Li 670.784	40886.4	3.101 ug/L	0.0151	6.021	mg/kg	0.0293	0.49%

METALS

Calibration Data

APPL, INC.

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
ARF No: 77838 SDG: 77838
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 11/24/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:34	%R(1)	True CCV1	Found 12:04	%R(1)	True CCV2	Found 13:38	%R(1)	
Aluminum (Al)	12500	12490	99.9	10000	9865	98.6	7500	7454	99.4	P
Boron (B)	500	526.8	105	500	487.4	97.5	375	369.5	98.5	P
Lithium (Li)	100.50	261.5	105	250	244.8	97.9	187.5	185.1	98.7	P
Zinc (Zn)	500	516.7	103	500	488.2	97.6	375	385.7	103	P

mm 12/1/15

(1) Control Limits: Metals 90-110

ILM02.0

24401_61CJU11S2_Phoe_151124A6010

FORM II (PART 1) - IN

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech

ARF No: 77838 SDG: 77838

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 11/24/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:34	%R(1)	True CCV1	Found 14:05	%R(1)	True CCV2	Found 15:04	%R(1)	
Aluminum (Al)	12500	12490	99.9	10000	10150	102	7500	7757	103	P
Boron (B)	500	526.8	105	500	488.3	97.7	375	353	94.1	P
Lithium (Li)	100.50	261.5	105	250	252.2	101	187.5	187.9	100	P
Zinc (Zn)	500	516.7	103	500	490.8	98.2	375	368.1	98.2	P

mm 12/1/15

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
 ARF No: 77838 SDG: 77838
 Initial Calibration Source: CPI
 Continuing Calibration Source: Environmental Express
 Analysis Date: 11/25/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 13:00	%R(1)	True CCV1	Found 14:09	%R(1)	True CCV2	Found 14:51	%R(1)	
Boron (B)	500	545.4	109	500	519.8	104	375	382.5	102	P
Lithium (Li)	250	260	104	250	249.1	99.7	187.5	188.7	101	P
Zinc (Zn)	500	526	105	500	510.5	102	375	387.3	103	P

mm 12/1/15

(1) Control Limits: Metals 90-110

ILM02.0

24401_61CJU11S2_Phoe_151125A6010

FORM II (PART 1) - IN

512

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech
 ARF No: 77838 SDG: 77838
 Initial Calibration Source: CPI
 Continuing Calibration Source: Environmental Express
 Analysis Date: 11/25/15 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found 13:00	%R(1)	True CCV1	Found 15:03	%R(1)	True	Found	
Boron (B)	500	545.4	109	500	505.7	101			P
Lithium (Li)	100 250	260	104	250	251.1	100			P
Zinc (Zn)	500	526	105	500	499.6	99.9			P

mm 12/1/15

(1) Control Limits: Metals 90-110

ILM02.0

24401_61CJU11S2_Phoe_151125A6010

FORM II (PART 1) - IN

513

A.P.P.L. INC.

3

BLANKS

Lab Name: A.P.P.L. INC.

Contract: Tetra Tech

ARF No.: 77838

SDG: 77838

Preparation Blank Matrix (soil/water): soil

Preparation Blank Concentration Units (ug/L or mg/kg): mg/Kg

Analysis Date: 11/24/15

Analyte	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	M
		C	1	C	2	C	3	C	
Aluminum (Al)	500.00	U	500.00	U	500.00	U	500.00	U	50.00 U P
Boron (B)	50.00	U	50.00	U	50.00	U	50.00	U	5.00 U P
Lithium (Li)	6.70	U	6.70	U	6.70	U	6.70	U	.67 U P
Zinc (Zn)	80.00	U	80.00	U	80.00	U	80.00	U	8.00 U P

A.P.P.L. INC.

3

BLANKS

Lab Name: A.P.P.L. INC.

Contract: Tetra Tech

ARF No.: 77838

SDG: 77838

Preparation Blank Matrix (soil/water): soil

Preparation Blank Concentration Units (ug/L or mg/kg): mg/Kg

Analysis Date: 11/24/15

Analyte	Initial Calibration Blank (ug/L) C 11:41	Continuing Calibration Blank (ug/L)						Preparation Blank C 12:31	M
		1	C	2	C	3	C		
Aluminum (Al)	500.00 U	500.00 U						50.00 U	P
Boron (B)	50.00 U	50.00 U						5.00 U	P
Lithium (Li)	6.70 U	6.70 U						.67 U	P
Zinc (Zn)	80.00 U	80.00 U						8.00 U	P

A.P.P.L. INC.

3

BLANKS

Lab Name: A.P.P.L. INC.

Contract: Tetra Tech

ARF No.: 77838

SDG: 77838

Preparation Blank Matrix (soil/water): soil

Preparation Blank Concentration Units (ug/L or mg/kg): mg/Kg

Analysis Date: 11/25/15

Analyte	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	M
		C	1	C	2	C	3	C	
Boron (B)	50.00	U	50.00	U	50.00	U	50.00	U	P
Lithium (Li)	6.70	U	6.70	U	6.70	U	6.70	U	P
Zinc (Zn)	80.00	U	80.00	U	80.00	U	80.00	U	P

A.P.P.L. INC.

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: A.P.P.L. INC.
ARF No.: 77838
ICP ID Number: Phoebe

Contract: Tetra Tech
SDG: 77838
ICS Source: Environmental Express

Analysis Date: 11/24/15

Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 11:55	Sol AB 12:00	%R(1)
Aluminum (Al)	100000	100000	97640	98350	98.3
Boron (B)			10.31	4.031	
Calcium (Ca)	100000	100000	102200	99250	99.3
Iron (Fe)	100000	100000	92290	90460	90.5
Lithium (Li)		0	0.06	0.077	
Magnesium (Mg)	100000	100000	98190	94970	95.0
Zinc (Zn)		500	-3.845	506.8	101

(1) Control Limits: Metals 80-120

24401_61CJU11S2_Phoe_151124A6010

FORM V - IN

ILM02.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: A.P.P.L. INC.
 ARF No.: 77838
 ICP ID Number: Phoebe

Contract: Tetra Tech
 SDG: 77838
 ICS Source: Environmental Express

Analysis Date: 11/25/15

Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 13:30	Sol AB 13:35	%R(1)
Aluminum (Al)	100000	100000	98130	101400	101
Boron (B)			17.98	12.17	
Calcium (Ca)	100000	100000	104800	105300	105
Iron (Fe)	100000	100000	94220	91420	91.4
Lithium (Li)		0	0.056	0.053	
Magnesium (Mg)	100000	100000	100000	100500	101
Zinc (Zn)		500	-4.247	510.3	102

(1) Control Limits: Metals 80-120

24401_61CJU11S2_Phoe_151125A6010

FORM V - IN

ILM02.0

A.P.P.L. INC.

9

ICP SERIAL DILUTION

CLIENT SAMPLE NO.

S67-SS53-0006

Lab Name: A.P.P.L. INC.
 ARF No.: 77838
 Matrix: soil

Contract: Tetra Tech
 SDG: 77838

Analysis Date: 11/24/15Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	%D	Q	M
Aluminum (Al)	8897		8444		5.09		

Comments:

11/24/15 13:16 AZ24401S01-1/2011/24/15 13:33 AZ24401S01-1/100

Sequence No.: 29
 Sample ID: AZ24401S01-1/100
 Analyst: RJS
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt: 1.03 g
 Dilution: 100X

Autosampler Location: 59
 Date Collected: 11/24/15 1:33:38 PM
 Data Type: Reprocessed on 11/25/15 9:11:11 AM
 Initial Sample Vol:
 Sample Prep Vol: 100 mL

Mean Data: AZ24401S01-1/100

Analyte	Mean Corrected Intensity	Calib.	Sample			
		Conc. Units	Conc. Units	Std.Dev.	Std.Dev.	RSD
Y 371.029	809933.7	102.1 %	0.57			0.56%
Y 371.029 Radial	745284.1	102.1 %	0.66			0.64%
Ag 338.289†	31.6	0.296 ug/L	0.4567	2.872 mg/kg	4.4335	154.37%
Al 308.215†	541.3	869.7 ug/L	8.13	8444 mg/kg	78.9	0.93%
As 188.979†	8.1	2.657 ug/L	1.1178	25.80 mg/kg	10.853	42.07%
B†	195.4	4.522 ug/L	0.1427	43.90 mg/kg	1.386	3.16%
Ba 233.527†	337.1	2.266 ug/L	0.1068	22.00 mg/kg	1.037	4.71%
Be 313.107†	18.2	0.084 ug/L	0.0113	0.815 mg/kg	0.1098	13.47%
Ca 315.887†	475.1	116.4 ug/L	3.33	1130 mg/kg	32.3	2.86%
Cd 214.440†	39.2	0.100 ug/L	0.0625	0.970 mg/kg	0.6069	62.54%
Co 228.616†	16.2	0.213 ug/L	0.3393	2.069 mg/kg	3.2942	159.23%
Cr 267.716†	311.8	3.702 ug/L	0.0521	35.94 mg/kg	0.506	1.41%
Cu 327.393†	-23.3	0.008 ug/L	0.9623	0.075 mg/kg	9.3425	>999.9%
Fe 273.955†	31590.2	1805 ug/L	19.6	17520 mg/kg	190.2	1.09%
K 766.490†	611.3	233.9 ug/L	19.03	2271 mg/kg	184.7	8.14%
Mg 285.213†	1409.6	181.8 ug/L	1.30	1765 mg/kg	12.6	0.72%
Mn 257.610†	56.8	4.732 ug/L	0.2637	45.94 mg/kg	2.561	5.57%
'Mo 202.031†	17.0	0.693 ug/L	0.1320	6.727 mg/kg	1.2812	19.05%
Na 589.592†	92.8	3.858 ug/L	4.9771	37.45 mg/kg	48.321	129.02%
Ni 231.604†	11.1	0.328 ug/L	0.4805	3.187 mg/kg	4.6649	146.35%
P 213.617†	82.1	21.79 ug/L	1.054	211.6 mg/kg	10.23	4.84%
Pb 220.353†	-3.1	-0.206 ug/L	1.8609	-1.996 mg/kg	18.0667	905.23%
Sb 206.836†	9.8	2.295 ug/L	0.3026	22.28 mg/kg	2.938	13.19%
Se 196.026†	5.3	1.684 ug/L	0.2796	16.35 mg/kg	2.714	16.60%
Sn 189.927†	3.3	0.434 ug/L	0.3688	4.209 mg/kg	3.5806	85.07%
Sr 421.552†	429.9	0.930 ug/L	0.1506	9.032 mg/kg	1.4623	16.19%
Ti 337.279†	348.5	13.08 ug/L	0.228	127.0 mg/kg	2.21	1.74%
Tl 190.801†	1.9	0.383 ug/L	0.7579	3.718 mg/kg	7.3586	197.92%
V 292.402†	642.4	3.495 ug/L	0.3679	33.93 mg/kg	3.572	10.53%
Zn 206.200†	107.9	2.958 ug/L	0.2611	28.72 mg/kg	2.535	8.83%
Li 670.784	. 7962.3	0.604 ug/L	0.0097	5.863 mg/kg	0.0945	1.61%

A.P.P.L. INC.
5B
POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

S67-SS53-0006

Lab Name: A.P.P.L. INC.
ARF No.: 77838

Contract: Tetra Tech
SDG: 77838

Analysis Date: 11/24/15

Concentration Units: mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Boron (B)	75-125	66.05	21.34	48.544	92.1		
Lithium (Li)	75-125	26.43	7.128	24.272	79.5		
Zinc (Zn)	75-125	105.5	28.65	97.087	79.2		

Comments:

11/24/15 14:39 AZ24401S01

11/25/15 14:59 AZ24401S01-A

Sequence No.: 13
 Sample ID: AZ24401S01-A
 Analyst: RJS
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt: 1.03 g
 Dilution:

Autosampler Location: 40
 Date Collected: 11/25/15 2:59:25 PM
 Data Type: Reprocessed on 11/30/15 9:44:43 AM
 Initial Sample Vol:
 Sample Prep Vol: 100 mL

Mean Data: AZ24401S01-A

Analyte	Mean Corrected Intensity	Calib.	Sample	Std.Dev.	RSD
	Conc. Units	Std.Dev.	Conc. Units	Std.Dev.	
Y 371.029	794873.7	98.70 %	1.407		1.43%
Y 371.029 Radial	722505.0	97.53 %	1.545		1.58%
Ag 338.289†	15943.5	150.8 ug/L	0.65	14.64 mg/kg	0.063 0.43%
Al 308.215†	53548.6	87740 ug/L	317.2	8519 mg/kg	30.8 0.36%
As 188.979†	1434.2	463.9 ug/L	5.61	45.04 mg/kg	0.545 1.21%
B†	29718.3	680.3 ug/L	1.41	66.05 mg/kg	0.137 0.21%
Ba 233.527†	83682.8	627.4 ug/L	3.33	60.91 mg/kg	0.324 0.53%
Be 313.107†	20225.7	98.39 ug/L	0.788	9.553 mg/kg	0.0765 0.80%
Ca 315.887†	216310.9	54800 ug/L	218.4	5320 mg/kg	21.2 0.40%
Cd 214.440†	19019.8	89.07 ug/L	1.307	8.647 mg/kg	0.1269 1.47%
Co 228.616†	25141.5	470.6 ug/L	6.08	45.69 mg/kg	0.590 1.29%
Cr 267.716†	62302.1	734.4 ug/L	3.00	71.30 mg/kg	0.291 0.41%
Cu 327.393†	50328.3	496.0 ug/L	1.17	48.15 mg/kg	0.114 0.24%
Fe 273.955†	2750058.7	159100 ug/L	324.3	15440 mg/kg	31.5 0.20%
K 766.490†	95997.0	36480 ug/L	99.1	3541 mg/kg	9.6 0.27%
Mg 285.213†	462320.0	60730 ug/L	119.5	5896 mg/kg	11.6 0.20%
Mn 257.610†	10989.3	917.7 ug/L	2.54	89.09 mg/kg	0.247 0.28%
Mo 202.031†	11448.3	407.2 ug/L	4.93	39.53 mg/kg	0.479 1.21%
Na 589.592†	304011.5	44590 ug/L	211.2	4329 mg/kg	20.5 0.47%
Ni 231.604†	19009.3	466.0 ug/L	6.04	45.24 mg/kg	0.586 1.30%
P 213.617†	20349.7	5441 ug/L	70.3	528.2 mg/kg	6.82 1.29%
Pb 220.353†	5340.5	511.9 ug/L	5.23	49.70 mg/kg	0.507 1.02%
Sb 206.836†	1707.0	383.2 ug/L	2.86	37.20 mg/kg	0.278 0.75%
Se 196.026†	1329.1	423.3 ug/L	5.65	41.09 mg/kg	0.548 1.33%
Sn 189.927†	3930.4	403.8 ug/L	6.53	39.20 mg/kg	0.634 1.62%
Sr 421.552†	230627.9	518.7 ug/L	1.93	50.36 mg/kg	0.187 0.37%
Ti 337.279†	44255.5	1677 ug/L	4.3	162.8 mg/kg	0.41 0.25%
Tl 190.801†	1924.2	412.6 ug/L	4.52	40.06 mg/kg	0.439 1.09%
V 292.402†	124615.2	725.2 ug/L	2.97	70.41 mg/kg	0.289 0.41%
Zn 206.200†	38360.7	1087 ug/L	8.2	105.5 mg/kg	0.80 0.75%
Li 670.784	3527722.4	272.2 ug/L	4.79	26.43 mg/kg	0.465 1.76%

=====

Reprocessing Begun

Logged In Analyst: chemist_metals

Technique: ICP Continuous

Results Data Set (original): 151124A2007X

Results Library (original): C:\PE\chemist\RESULTS\Results.mdb

Results Data Set (reprocessed):

Results Library (reprocessed):

=====

Sequence No.: 1

Sample ID: CalBlk 151124RJS I:PB O:R

Analyst:

Logged In Analyst (Original) : chemist_metals

Initial Sample Wt:

Dilution:

Autosampler Location: 1

Date Collected: 11/24/15 11:19:23 AM

Data Type: Reprocessed on 11/25/15 9:10:31 AM

Initial Sample Vol:

Sample Prep Vol:

Mean Data: CalBlk 151124RJS I:PB O:R

Mean Corrected

Analyte	Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	793583.8	6651.84	0.84%	100.00	%
Y 371.029 Radial	729598.5	6003.41	0.82%	100.00	%
Ag 338.289†	-414.4	11.43	2.76%	[0.00]	ug/L
Al 308.215†	49.0	14.71	30.04%	[0.00]	ug/L
As 188.979†	6.9	2.43	35.33%	[0.00]	ug/L
B†	-165.2	2.96	1.79%	[0.00]	ug/L
Ba 233.527†	122.6	6.32	5.15%	[0.00]	ug/L
Be 313.107†	-78.3	10.03	12.81%	[0.00]	ug/L
Ca 315.887†	-43.5	5.02	11.54%	[0.00]	ug/L
Cd 214.440†	223.8	4.18	1.87%	[0.00]	ug/L
Co 228.616†	86.3	7.81	9.05%	[0.00]	ug/L
Cr 267.716†	292.0	6.14	2.10%	[0.00]	ug/L
Cu 327.393†	287.8	64.67	22.47%	[0.00]	ug/L
Fe 273.955†	-229.4	8.78	3.83%	[0.00]	ug/L
K 766.490†	-349.7	26.79	7.66%	[0.00]	ug/L
Mg 285.213†	-70.8	8.59	12.13%	[0.00]	ug/L
Mn 257.610†	-68.1	4.33	6.36%	[0.00]	ug/L
Mo 202.031†	79.6	4.20	5.28%	[0.00]	ug/L
Na 589.592†	-83.3	35.22	42.29%	[0.00]	ug/L
Ni 231.604†	40.2	12.89	32.08%	[0.00]	ug/L
P 213.617†	3.8	7.55	199.54%	[0.00]	ug/L
Pb 220.353†	12.4	11.78	95.20%	[0.00]	ug/L
Sb 206.836†	-13.0	2.48	19.10%	[0.00]	ug/L
Se 196.026†	1.2	3.49	282.79%	[0.00]	ug/L
Sn 189.927†	30.8	4.32	14.03%	[0.00]	ug/L
Sr 421.552†	88.4	90.86	102.83%	[0.00]	ug/L
Ti 337.279†	-238.5	2.26	0.95%	[0.00]	ug/L
Tl 190.801†	-7.5	2.18	28.99%	[0.00]	ug/L
V 292.402†	-579.5	88.11	15.21%	[0.00]	ug/L
Zn 206.200†	-707.5	8.27	1.17%	[0.00]	ug/L
Li 670.784	1120.0	67.46	6.02%	[0.00]	ug/L

Sequence No.: 2
 Sample ID: STD 1 151124RJS I:PB O:RJ
 Analyst:
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt:
 Dilution:

Autosampler Location: 2
 Date Collected: 11/24/15 11:23:33 AM
 Data Type: Reprocessed on 11/25/15 9:10:32 AM
 Initial Sample Vol:
 Sample Prep Vol:

Mean Data: STD 1 151124RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	787499.6	7838.05	1.00%	99.23	%
Y 371.029 Radial	722770.3	7564.48	1.05%	99.06	%
Ag 338.289†	92.1	72.22	78.42%	[0.5]	ug/L
Al 308.215†	34.2	11.02	32.20%	[50]	ug/L
As 188.979†	4.7	1.31	28.03%	[2]	ug/L
B†	1198.9	9.62	0.80%	[25]	ug/L
Ba 233.527†	223.0	13.05	5.85%	[1.5]	ug/L
Be 313.107†	216.3	5.05	2.34%	[1]	ug/L
Ca 315.887†	237.6	5.22	2.20%	[50]	ug/L
Cd 214.440†	68.9	11.12	16.14%	[0.25]	ug/L
Co 228.616†	153.7	5.25	3.42%	[2.5]	ug/L
Cr 267.716†	66.6	9.90	14.87%	[0.5]	ug/L
Cu 327.393†	239.7	66.94	27.92%	[2.5]	ug/L
Fe 273.955†	436.6	16.37	3.75%	[25]	ug/L
K 766.490†	1288.7	187.36	14.54%	[25]	ug/L
Mg 285.213†	210.8	7.71	3.66%	[25]	ug/L
Mn 257.610†	14.7	3.31	22.60%	[1]	ug/L
Mo 202.031†	34.1	0.15	0.44%	[1]	ug/L
Na 589.592†	3681.1	60.99	1.66%	[500]	ug/L
Ni 231.604†	33.1	4.25	12.82%	[1]	ug/L
P 213.617†	46.8	6.03	12.89%	[12.5]	ug/L
Pb 220.353†	2.9	5.62	196.62%	[1.5]	ug/L
Sb 206.836†	5.7	2.39	41.65%	[2]	ug/L
Se 196.026†	14.6	1.37	9.35%	[2]	ug/L
Sn 189.927†	21.6	3.25	15.07%	[3]	ug/L
Sr 421.552†	633.4	74.67	11.79%	[1]	ug/L
Ti 337.279†	66.4	6.54	9.86%	[2.5]	ug/L
Tl 190.801†	10.4	0.79	7.56%	[2]	ug/L
V 292.402†	233.4	56.73	24.30%	[0.5]	ug/L
Zn 206.200†	966.3	10.12	1.05%	[25]	ug/L
Li 670.784	54228.3	426.84	0.79%	[5]	ug/L

=====
Sequence No.: 3
Sample ID: STD 2 151124RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

=====
Autosampler Location: 3
Date Collected: 11/24/15 11:27:53 AM
Data Type: Reprocessed on 11/25/15 9:10:34 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 2 151124RJS I:PB O:RJ

Analyte	Mean Corrected	Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	769843.0	8073.12	1.05%	97.01	%	
Y 371.029 Radial	701155.5	8102.80	1.16%	96.10	%	
Ag 338.289†	26852.4	312.57	1.16%	[250]	ug/L	
Al 308.215†	6362.7	125.03	1.97%	[10000]	ug/L	
As 188.979†	1509.6	22.67	1.50%	[500]	ug/L	
B†	21512.3	219.39	1.02%	[500]	ug/L	
Ba 233.527†	65150.3	544.08	0.84%	[500]	ug/L	
Be 313.107†	112066.7	3583.31	3.20%	[500]	ug/L	
Ca 315.887†	104707.5	3092.32	2.95%	[25000]	ug/L	
Cd 214.440†	99762.0	942.09	0.94%	[500]	ug/L	
Co 228.616†	26771.6	311.03	1.16%	[500]	ug/L	
Cr 267.716†	43087.3	461.62	1.07%	[500]	ug/L	
Cu 327.393†	52533.1	660.15	1.26%	[500]	ug/L	
Fe 273.955†	176622.4	1574.67	0.89%	[10000]	ug/L	
K 766.490†	26378.8	291.17	1.10%	[10000]	ug/L	
Mg 285.213†	203717.3	5735.06	2.82%	[25000]	ug/L	
Mn 257.610†	6319.5	103.79	1.64%	[500]	ug/L	
Mo 202.031†	13991.9	81.70	0.58%	[500]	ug/L	
Na 589.592†	89616.7	2437.34	2.72%	[12500]	ug/L	
Ni 231.604†	20828.4	195.39	0.94%	[500]	ug/L	
P 213.617†	9334.9	100.60	1.08%	[2500]	ug/L	
Pb 220.353†	5321.0	49.93	0.94%	[500]	ug/L	
Sb 206.836†	2106.1	0.79	0.04%	[500]	ug/L	
Se 196.026†	1583.2	13.11	0.83%	[500]	ug/L	
Sn 189.927†	5004.5	35.24	0.70%	[500]	ug/L	
Sr 421.552†	236740.8	6369.57	2.69%	[500]	ug/L	
Ti 337.279†	13568.6	251.82	1.86%	[500]	ug/L	
Tl 190.801†	2466.4	18.16	0.74%	[500]	ug/L	
V 292.402†	83326.5	935.64	1.12%	[500]	ug/L	
Zn 206.200†	16944.2	140.09	0.83%	[500]	ug/L	
Li 670.784	3217911.1	25038.31	0.78%	[250]	ug/L	

=====
Sequence No.: 4
Sample ID: STD 3 151124RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 11/24/15 11:31:20 AM
Data Type: Reprocessed on 11/25/15 9:10:35 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 3 151124RJS I:PB O:RJ

Analyte	Mean Corrected	Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	760356.9	6328.84	0.83%	95.81	%	
Y 371.029 Radial	694993.2	6201.84	0.89%	95.26	%	
Ag 338.289†	53401.6	324.30	0.61%	[500]	ug/L	
Al 308.215†	12378.7	603.82	4.88%	[20000]	ug/L	
As 188.979†	3032.6	41.15	1.36%	[1000]	ug/L	
B†	43265.6	157.27	0.36%	[1000]	ug/L	
Ba 233.527†	129312.5	545.39	0.42%	[1000]	ug/L	
Be 313.107†	215620.5	9790.78	4.54%	[1000]	ug/L	
Ca 315.887†	202401.9	8800.30	4.35%	[50000]	ug/L	
Cd 214.440†	196640.5	726.27	0.37%	[1000]	ug/L	
Co 228.616†	52933.7	148.15	0.28%	[1000]	ug/L	
Cr 267.716†	85300.5	433.92	0.51%	[1000]	ug/L	
Cu 327.393†	105052.0	597.28	0.57%	[1000]	ug/L	
Fe 273.955†	349161.6	1447.35	0.41%	[20000]	ug/L	
K 766.490†	51916.3	2420.69	4.66%	[20000]	ug/L	
Mg 285.213†	388983.7	16160.73	4.15%	[50000]	ug/L	
Mn 257.610†	12211.3	636.05	5.21%	[1000]	ug/L	
Mo 202.031†	28923.5	335.38	1.16%	[1000]	ug/L	
Na 589.592†	173283.4	7101.52	4.10%	[25000]	ug/L	
Ni 231.604†	40962.2	180.96	0.44%	[1000]	ug/L	
P 213.617†	18875.0	221.86	1.18%	[5000]	ug/L	
Pb 220.353†	10509.0	136.23	1.30%	[1000]	ug/L	
Sb 206.836†	4272.2	52.95	1.24%	[1000]	ug/L	
Se 196.026†	3163.5	40.65	1.28%	[1000]	ug/L	
Sn 189.927†	10016.1	119.95	1.20%	[1000]	ug/L	
Sr 421.552†	457239.4	19979.76	4.37%	[1000]	ug/L	
Ti 337.279†	26480.4	1400.31	5.29%	[1000]	ug/L	
Tl 190.801†	4872.2	62.84	1.29%	[1000]	ug/L	
V 292.402†	165975.7	933.62	0.56%	[1000]	ug/L	
Zn 206.200†	34544.3	389.11	1.13%	[1000]	ug/L	
Li 670.784	6632057.6	34567.49	0.52%	[500]	ug/L	

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 338.289	3	Lin Thru 0	0.0	106.9	0.00000	0.999997	
Al 308.215	3	Lin Thru 0	0.0	0.6224	0.00000	0.999938	
As 188.979	3	Lin Thru 0	0.0	3.030	0.00000	0.999998	
B	3	Lin Thru 0	0.0	43.22	0.00000	0.999995	
Ba 233.527	3	Lin Thru 0	0.0	129.5	0.00000	0.999995	
Be 313.107	3	Lin Thru 0	0.0	217.3	0.00000	0.999877	
Ca 315.887	3	Lin Thru 0	0.0	4.076	0.00000	0.999905	
Cd 214.440	3	Lin Thru 0	0.0	197.2	0.00000	0.999983	
Co 228.616	3	Lin Thru 0	0.0	53.06	0.00000	0.999989	
Cr 267.716	3	Lin Thru 0	0.0	85.48	0.00000	0.999992	
Cu 327.393	3	Lin Thru 0	0.0	105.1	0.00000	1.000000	
Fe 273.955	3	Lin Thru 0	0.0	17.50	0.00000	0.999989	
K 766.490	3	Lin Thru 0	0.0	2.604	0.00000	0.999758	
Mg 285.213	3	Lin Thru 0	0.0	7.853	0.00000	0.999823	
Mn 257.610	3	Lin Thru 0	0.0	12.30	0.00000	0.999903	
Mo 202.031	3	Lin Thru 0	0.0	28.74	0.00000	0.999914	
Na 589.592	3	Lin Thru 0	0.0	6.979	0.00000	0.999907	
Ni 231.604	3	Lin Thru 0	0.0	41.10	0.00000	0.999977	
P 213.617	3	Lin Thru 0	0.0	3.767	0.00000	0.999991	
Pb 220.353	3	Lin Thru 0	0.0	10.54	0.00000	0.999987	
Sb 206.836	3	Lin Thru 0	0.0	4.260	0.00000	0.999984	
Se 196.026	3	Lin Thru 0	0.0	3.164	0.00000	0.999997	

Sn 189.927	3	Lin Thru 0	0.0	10.01	0.00000	1.000000
Sr 421.552	3	Lin Thru 0	0.0	460.5	0.00000	0.999900
Ti 337.279	3	Lin Thru 0	0.0	26.61	0.00000	0.999951
Tl 190.801	3	Lin Thru 0	0.0	4.884	0.00000	0.999988
V 292.402	3	Lin Thru 0	0.0	166.1	0.00000	0.999998
Zn 206.200	3	Lin Thru 0	0.0	34.42	0.00000	0.999967
Li 670.784	3	Lin Thru 0	0.0	13190	0.00000	0.999928

=====
Sequence No.: 5
Sample ID: ICV 151124RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

=====
Autosampler Location: 5
Date Collected: 11/24/15 11:34:48 AM
Data Type: Reprocessed on 11/25/15 9:10:37 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICV 151124RJS I:PB O:RJS

Analyte	Mean Corrected		Calib.	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc. Units			Conc. Units	Std.Dev.		
Y 371.029	777286.0	97.95 %	1.557					1.59%
Y 371.029 Radial	708851.0	97.16 %	1.616					1.66%
Ag 338.289†	25703.9	240.4 ug/L	2.98		240.4 ug/L	2.98		1.24%
QC value within limits for Ag 338.289		Recovery = 96.16%						
Al 308.215†	7770.7	12490 ug/L	387.3		12490 ug/L	387.3		3.10%
QC value within limits for Al 308.215		Recovery = 99.95%						
As 188.979†	1444.6	476.8 ug/L	5.38		476.8 ug/L	5.38		1.13%
QC value within limits for As 188.979		Recovery = 95.35%						
B†	22767.1	526.8 ug/L	4.62		526.8 ug/L	4.62		0.88%
QC value within limits for B		Recovery = 105.36%						
Ba 233.527†	67894.0	522.2 ug/L	7.30		522.2 ug/L	7.30		1.40%
QC value within limits for Ba 233.527		Recovery = 104.44%						
Be 313.107†	110741.2	509.6 ug/L	17.72		509.6 ug/L	17.72		3.48%
QC value within limits for Be 313.107		Recovery = 101.91%						
Ca 315.887†	53304.9	13070 ug/L	413.3		13070 ug/L	413.3		3.16%
QC value within limits for Ca 315.887		Recovery = 104.59%						
Cd 214.440†	104427.4	529.3 ug/L	6.25		529.3 ug/L	6.25		1.18%
QC value within limits for Cd 214.440		Recovery = 105.85%						
Co 228.616†	28159.3	529.2 ug/L	6.99		529.2 ug/L	6.99		1.32%
QC value within limits for Co 228.616		Recovery = 105.83%						
Cr 267.716†	44954.9	525.3 ug/L	8.09		525.3 ug/L	8.09		1.54%
QC value within limits for Cr 267.716		Recovery = 105.06%						
Cu 327.393†	54780.2	522.0 ug/L	8.17		522.0 ug/L	8.17		1.56%
QC value within limits for Cu 327.393		Recovery = 104.41%						
Fe 273.955†	222661.3	12680 ug/L	165.6		12680 ug/L	165.6		1.31%
QC value within limits for Fe 273.955		Recovery = 101.43%						
K 766.490†	32938.9	12640 ug/L	248.5		12640 ug/L	248.5		1.97%
QC value within limits for K 766.490		Recovery = 101.09%						
Mg 285.213†	100162.0	12770 ug/L	431.8		12770 ug/L	431.8		3.38%
QC value within limits for Mg 285.213		Recovery = 102.13%						
Mn 257.610†	6338.2	515.8 ug/L	14.57		515.8 ug/L	14.57		2.83%
QC value within limits for Mn 257.610		Recovery = 103.16%						
Mo 202.031†	13607.3	473.7 ug/L	5.83		473.7 ug/L	5.83		1.23%
QC value within limits for Mo 202.031		Recovery = 94.75%						
Na 589.592†	90242.7	12870 ug/L	307.5		12870 ug/L	307.5		2.39%
QC value within limits for Na 589.592		Recovery = 102.93%						
Ni 231.604†	22162.9	536.3 ug/L	5.43		536.3 ug/L	5.43		1.01%
QC value within limits for Ni 231.604		Recovery = 107.25%						
P 213.617†	9597.7	2548 ug/L	25.8		2548 ug/L	25.8		1.01%
QC value within limits for P 213.617		Recovery = 101.92%						
Pb 220.353†	5654.4	539.1 ug/L	10.13		539.1 ug/L	10.13		1.88%
QC value within limits for Pb 220.353		Recovery = 107.81%						
Sb 206.836†	2160.0	507.0 ug/L	10.02		507.0 ug/L	10.02		1.98%
QC value within limits for Sb 206.836		Recovery = 101.41%						
Se 196.026†	1694.2	535.5 ug/L	8.70		535.5 ug/L	8.70		1.62%
QC value within limits for Se 196.026		Recovery = 107.09%						
Sn 189.927†	2510.4	254.2 ug/L	4.72		254.2 ug/L	4.72		1.86%
QC value within limits for Sn 189.927		Recovery = 101.66%						
Sr 421.552†	239057.9	519.0 ug/L	17.28		519.0 ug/L	17.28		3.33%
QC value within limits for Sr 421.552		Recovery = 103.80%						
Ti 337.279†	12634.4	474.5 ug/L	13.11		474.5 ug/L	13.11		2.76%
QC value within limits for Ti 337.279		Recovery = 94.90%						
Tl 190.801†	2638.7	540.2 ug/L	7.59		540.2 ug/L	7.59		1.41%
QC value within limits for Tl 190.801		Recovery = 108.05%						
V 292.402†	86181.8	526.2 ug/L	7.68		526.2 ug/L	7.68		1.46%
QC value within limits for V 292.402		Recovery = 105.24%						
Zn 206.200†	17761.1	516.7 ug/L	5.56		516.7 ug/L	5.56		1.08%
QC value within limits for Zn 206.200		Recovery = 103.33%						

Li 670.784 3447800.0 261.5 ug/L 1.14 261.5 ug/L 1.14 0.43%
QC value within limits for Li 670.784 Recovery = 104.59%
All analyte(s) passed QC.

=====
Sequence No.: 6
Sample ID: ICB 151124RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/24/15 11:41:30 AM
Data Type: Reprocessed on 11/25/15 9:10:38 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICB 151124RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	796444.6	100.4 %	1.02			1.02%
Y 371.029 Radial	732212.3	100.4 %	1.12			1.11%
Ag 338.289†	1.7	0.016 ug/L	0.2678	0.016 ug/L	0.2678	>999.9%
QC value within limits for Ag 338.289		Recovery = Not calculated				
Al 308.215†	6.3	10.20 ug/L	15.900	10.20 ug/L	15.900	155.91%
QC value within limits for Al 308.215		Recovery = Not calculated				
As 188.979†	2.9	0.967 ug/L	0.6633	0.967 ug/L	0.6633	68.57%
QC value within limits for As 188.979		Recovery = Not calculated				
B†	144.0	3.331 ug/L	0.1941	3.331 ug/L	0.1941	5.83%
QC value within limits for B		Recovery = Not calculated				
Ba 233.527†	5.5	0.043 ug/L	0.1389	0.043 ug/L	0.1389	326.71%
QC value within limits for Ba 233.527		Recovery = Not calculated				
Be 313.107†	24.5	0.113 ug/L	0.0400	0.113 ug/L	0.0400	35.50%
QC value within limits for Be 313.107		Recovery = Not calculated				
Ca 315.887†	20.5	5.030 ug/L	4.1853	5.030 ug/L	4.1853	83.21%
QC value within limits for Ca 315.887		Recovery = Not calculated				
Cd 214.440†	42.6	0.217 ug/L	0.1076	0.217 ug/L	0.1076	49.68%
QC value within limits for Cd 214.440		Recovery = Not calculated				
Co 228.616†	9.8	0.187 ug/L	0.1284	0.187 ug/L	0.1284	68.63%
QC value within limits for Co 228.616		Recovery = Not calculated				
Cr 267.716†	21.5	0.252 ug/L	0.0297	0.252 ug/L	0.0297	11.77%
QC value within limits for Cr 267.716		Recovery = Not calculated				
Cu 327.393†	-16.5	-0.157 ug/L	0.7334	-0.157 ug/L	0.7334	466.78%
QC value within limits for Cu 327.393		Recovery = Not calculated				
Fe 273.955†	16.6	0.895 ug/L	0.2976	0.895 ug/L	0.2976	33.27%
QC value within limits for Fe 273.955		Recovery = Not calculated				
K 766.490†	112.4	43.16 ug/L	27.530	43.16 ug/L	27.530	63.79%
QC value within limits for K 766.490		Recovery = Not calculated				
Mg 285.213†	35.5	4.515 ug/L	0.6095	4.515 ug/L	0.6095	13.50%
QC value within limits for Mg 285.213		Recovery = Not calculated				
Mn 257.610†	-1.9	-0.158 ug/L	0.6169	-0.158 ug/L	0.6169	390.41%
QC value within limits for Mn 257.610		Recovery = Not calculated				
Mo 202.031†	26.5	0.920 ug/L	0.1774	0.920 ug/L	0.1774	19.28%
QC value within limits for Mo 202.031		Recovery = Not calculated				
Na 589.592†	111.3	15.92 ug/L	5.096	15.92 ug/L	5.096	32.00%
QC value within limits for Na 589.592		Recovery = Not calculated				
Ni 231.604†	-2.7	-0.068 ug/L	0.2504	-0.068 ug/L	0.2504	369.42%
QC value within limits for Ni 231.604		Recovery = Not calculated				
P 213.617†	-1.7	-0.452 ug/L	0.0370	-0.452 ug/L	0.0370	8.19%
QC value within limits for P 213.617		Recovery = Not calculated				
Pb 220.353†	7.1	0.682 ug/L	2.2383	0.682 ug/L	2.2383	328.29%
QC value within limits for Pb 220.353		Recovery = Not calculated				
Sb 206.836†	7.1	1.678 ug/L	0.6188	1.678 ug/L	0.6188	36.88%
QC value within limits for Sb 206.836		Recovery = Not calculated				
Se 196.026†	5.6	1.785 ug/L	0.7376	1.785 ug/L	0.7376	41.33%
QC value within limits for Se 196.026		Recovery = Not calculated				
Sn 189.927†	7.7	0.767 ug/L	0.4562	0.767 ug/L	0.4562	59.47%
QC value within limits for Sn 189.927		Recovery = Not calculated				
Sr 421.552†	153.9	0.334 ug/L	0.0599	0.334 ug/L	0.0599	17.94%
QC value within limits for Sr 421.552		Recovery = Not calculated				
Ti 337.279†	3.4	0.127 ug/L	0.7178	0.127 ug/L	0.7178	563.13%
QC value within limits for Ti 337.279		Recovery = Not calculated				
Tl 190.801†	2.0	0.404 ug/L	0.4521	0.404 ug/L	0.4521	111.82%
QC value within limits for Tl 190.801		Recovery = Not calculated				
V 292.402†	100.6	0.620 ug/L	0.0902	0.620 ug/L	0.0902	14.54%
QC value within limits for V 292.402		Recovery = Not calculated				
Zn 206.200†	13.0	0.383 ug/L	0.5266	0.383 ug/L	0.5266	137.60%
QC value within limits for Zn 206.200		Recovery = Not calculated				

Li 670.784 86.7 0.007 ug/L 0.0085 0.007 ug/L 0.0085 129.19%
QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 8
Sample ID: ICSA 151124RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

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Autosampler Location: 6
Date Collected: 11/24/15 11:55:17 AM
Data Type: Reprocessed on 11/25/15 9:10:41 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSA 151124RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	746184.4	94.03 %	0.328		0.35%
Y 371.029 Radial	678948.0	93.06 %	0.298		0.32%
Ag 338.289†	45.8	0.428 ug/L	0.7623	0.428 ug/L	0.7623 177.95%
QC value within limits for Ag 338.289		Recovery = Not calculated			
Al 308.215†	60784.3	97640 ug/L	4323.3	97640 ug/L	4323.3 4.43%
QC value within limits for Al 308.215		Recovery = 97.64%			
As 188.979†	6.6	2.180 ug/L	0.6933	2.180 ug/L	0.6933 31.81%
QC value within limits for As 188.979		Recovery = Not calculated			
B†	445.6	10.31 ug/L	0.332	10.31 ug/L	0.332 3.22%
QC value within limits for B		Recovery = Not calculated			
Ba 233.527†	2101.0	-1.361 ug/L	0.2711	-1.361 ug/L	0.2711 19.92%
QC value within limits for Ba 233.527		Recovery = Not calculated			
Be 313.107†	12.7	0.058 ug/L	0.0242	0.058 ug/L	0.0242 41.56%
QC value within limits for Be 313.107		Recovery = Not calculated			
Ca 315.887†	416489.6	102200 ug/L	4339.4	102200 ug/L	4339.4 4.25%
QC value within limits for Ca 315.887		Recovery = 102.17%			
Cd 214.440†	995.8	0.636 ug/L	0.1569	0.636 ug/L	0.1569 24.67%
QC value within limits for Cd 214.440		Recovery = Not calculated			
Co 228.616†	151.0	-1.210 ug/L	0.4067	-1.210 ug/L	0.4067 33.60%
QC value within limits for Co 228.616		Recovery = Not calculated			
Cr 267.716†	-140.1	0.721 ug/L	0.2689	0.721 ug/L	0.2689 37.29%
QC value within limits for Cr 267.716		Recovery = Not calculated			
Cu 327.393†	-693.1	-1.379 ug/L	0.6514	-1.379 ug/L	0.6514 47.24%
QC value within limits for Cu 327.393		Recovery = Not calculated			
Fe 273.955†	1615374.2	92290 ug/L	66.1	92290 ug/L	66.1 0.07%
QC value within limits for Fe 273.955		Recovery = 92.29%			
K 766.490†	185.9	-0.405 ug/L	31.4680	-0.405 ug/L	31.4680 >999.9%
QC value within limits for K 766.490		Recovery = Not calculated			
Mg 285.213†	770261.9	98190 ug/L	4459.8	98190 ug/L	4459.8 4.54%
QC value within limits for Mg 285.213		Recovery = 98.19%			
Mn 257.610†	-12.9	0.985 ug/L	0.3992	0.985 ug/L	0.3992 40.55%
QC value within limits for Mn 257.610		Recovery = Not calculated			
Mo 202.031†	-147.1	-0.911 ug/L	0.5239	-0.911 ug/L	0.5239 57.51%
QC value within limits for Mo 202.031		Recovery = Not calculated			
Na 589.592†	575.2	-348.2 ug/L	5.92	-348.2 ug/L	5.92 1.70%
QC value within limits for Na 589.592		Recovery = Not calculated			
Ni 231.604†	-132.0	-0.078 ug/L	0.1809	-0.078 ug/L	0.1809 230.52%
QC value within limits for Ni 231.604		Recovery = Not calculated			
P 213.617†	9.0	2.402 ug/L	1.6259	2.402 ug/L	1.6259 67.69%
QC value within limits for P 213.617		Recovery = Not calculated			
Pb 220.353†	-111.4	2.067 ug/L	2.5355	2.067 ug/L	2.5355 122.64%
QC value within limits for Pb 220.353		Recovery = Not calculated			
Sb 206.836†	-15.5	-3.631 ug/L	0.4796	-3.631 ug/L	0.4796 13.21%
QC value within limits for Sb 206.836		Recovery = Not calculated			
Se 196.026†	15.1	4.776 ug/L	2.5799	4.776 ug/L	2.5799 54.01%
QC value within limits for Se 196.026		Recovery = Not calculated			
Sn 189.927†	-33.7	0.457 ug/L	0.2751	0.457 ug/L	0.2751 60.23%
QC value within limits for Sn 189.927		Recovery = Not calculated			
Sr 421.552†	486.7	0.007 ug/L	0.0639	0.007 ug/L	0.0639 912.26%
QC value within limits for Sr 421.552		Recovery = Not calculated			
Ti 337.279†	48.2	-0.181 ug/L	0.3669	-0.181 ug/L	0.3669 202.96%
QC value within limits for Ti 337.279		Recovery = Not calculated			
Tl 190.801†	-2.0	-0.410 ug/L	1.4796	-0.410 ug/L	1.4796 360.73%
QC value within limits for Tl 190.801		Recovery = Not calculated			
V 292.402†	3544.2	0.964 ug/L	1.0456	0.964 ug/L	1.0456 108.44%
QC value within limits for V 292.402		Recovery = Not calculated			
Zn 206.200†	286.1	-3.845 ug/L	0.6239	-3.845 ug/L	0.6239 16.23%
QC value within limits for Zn 206.200		Recovery = Not calculated			

Li 670.784 791.6 0.060 ug/L 0.0141 0.060 ug/L 0.0141 23.54%
All analyte(s) passed QC.

=====
Sequence No.: 9 Autosampler Location: 7
Sample ID: ICSAB 151124RJS I:PB O:RJ Date Collected: 11/24/15 12:00:33 PM
Analyst: Data Type: Reprocessed on 11/25/15 9:10:43 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: ICSAB 151124RJS I:PB O:RJ						
	Mean Corrected	Calib.		Sample	Std.Dev.	RSD
Analyte	Intensity	Conc. Units	Std.Dev.	Conc. Units	Std.Dev.	RSD
Y 371.029	742281.5	93.54 %	0.515			0.55%
Y 371.029 Radial	675258.5	92.55 %	0.520			0.56%
Ag 338.289†	52981.3	495.5 ug/L	9.47	495.5 ug/L	9.47	1.91%
QC value within limits for Ag 338.289 Recovery = 99.10%						
Al 308.215†	61223.3	98350 ug/L	2970.2	98350 ug/L	2970.2	3.02%
QC value within limits for Al 308.215 Recovery = 98.35%						
As 188.979†	787.6	259.9 ug/L	3.13	259.9 ug/L	3.13	1.20%
QC value within limits for As 188.979 Recovery = 103.98%						
B†	174.2	4.031 ug/L	0.6474	4.031 ug/L	0.6474	16.06%
QC value within limits for B Recovery = Not calculated						
Ba 233.527†	35230.9	255.0 ug/L	5.23	255.0 ug/L	5.23	2.05%
QC value within limits for Ba 233.527 Recovery = 101.99%						
Be 313.107†	57085.5	262.7 ug/L	8.13	262.7 ug/L	8.13	3.09%
QC value within limits for Be 313.107 Recovery = 105.07%						
Ca 315.887†	404577.9	99250 ug/L	2684.5	99250 ug/L	2684.5	2.70%
QC value within limits for Ca 315.887 Recovery = 99.25%						
Cd 214.440†	101062.7	508.3 ug/L	8.90	508.3 ug/L	8.90	1.75%
QC value within limits for Cd 214.440 Recovery = 101.65%						
Co 228.616†	14022.8	260.2 ug/L	3.14	260.2 ug/L	3.14	1.21%
QC value within limits for Co 228.616 Recovery = 104.08%						
Cr 267.716†	22726.1	267.7 ug/L	3.20	267.7 ug/L	3.20	1.20%
QC value within limits for Cr 267.716 Recovery = 107.08%						
Cu 327.393†	27663.5	267.6 ug/L	6.49	267.6 ug/L	6.49	2.43%
QC value within limits for Cu 327.393 Recovery = 107.04%						
Fe 273.955†	1583726.9	90460 ug/L	1701.2	90460 ug/L	1701.2	1.88%
QC value within limits for Fe 273.955 Recovery = 90.46%						
K 766.490†	-30.8	-83.59 ug/L	56.530	-83.59 ug/L	56.530	67.63%
QC value within limits for K 766.490 Recovery = Not calculated						
Mg 285.213†	744971.0	94970 ug/L	2533.7	94970 ug/L	2533.7	2.67%
QC value within limits for Mg 285.213 Recovery = 94.97%						
Mn 257.610†	3202.0	262.5 ug/L	8.36	262.5 ug/L	8.36	3.19%
QC value within limits for Mn 257.610 Recovery = 104.98%						
Mo 202.031†	6683.4	236.6 ug/L	4.47	236.6 ug/L	4.47	1.89%
QC value within limits for Mo 202.031 Recovery = 94.64%						
Na 589.592†	355.4	-370.7 ug/L	26.72	-370.7 ug/L	26.72	7.21%
QC value within limits for Na 589.592 Recovery = Not calculated						
Ni 231.604†	21304.6	519.9 ug/L	6.39	519.9 ug/L	6.39	1.23%
QC value within limits for Ni 231.604 Recovery = 103.98%						
P 213.617†	-23.4	-6.200 ug/L	0.7858	-6.200 ug/L	0.7858	12.67%
QC value within limits for P 213.617 Recovery = Not calculated						
Pb 220.353†	5348.1	521.1 ug/L	8.13	521.1 ug/L	8.13	1.56%
QC value within limits for Pb 220.353 Recovery = 104.22%						
Sb 206.836†	1055.0	247.6 ug/L	3.43	247.6 ug/L	3.43	1.38%
QC value within limits for Sb 206.836 Recovery = 99.06%						
Se 196.026†	822.4	259.9 ug/L	6.54	259.9 ug/L	6.54	2.52%
QC value within limits for Se 196.026 Recovery = 103.97%						
Sn 189.927†	-31.3	0.579 ug/L	0.7605	0.579 ug/L	0.7605	131.34%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	515.7	0.098 ug/L	0.1735	0.098 ug/L	0.1735	176.93%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 337.279†	13.4	-1.433 ug/L	1.2229	-1.433 ug/L	1.2229	85.34%
QC value within limits for Ti 337.279 Recovery = Not calculated						
Tl 190.801†	1226.2	251.1 ug/L	5.47	251.1 ug/L	5.47	2.18%
QC value within limits for Tl 190.801 Recovery = 100.42%						
V 292.402†	46186.5	263.4 ug/L	4.68	263.4 ug/L	4.68	1.78%
QC value within limits for V 292.402 Recovery = 105.34%						
Zn 206.200†	17813.8	506.8 ug/L	5.91	506.8 ug/L	5.91	1.17%
QC value within limits for Zn 206.200 Recovery = 101.35%						

Method: 151124A2007Li

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Date: 11/25/15 9:10:44 AM

Li 670.784 1019.8 0.077 ug/L 0.0058 0.077 ug/L 0.0058 7.48%
All analyte(s) passed QC.

=====
 Sequence No.: 10 Autosampler Location: 3
 Sample ID: CCV1 151124RJS I:PB O:RJS Date Collected: 11/24/15 12:04:52 PM
 Analyst: Data Type: Reprocessed on 11/25/15 9:10:44 AM
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt: Initial Sample Vol:
 Dilution: Sample Prep Vol:

Mean Data: CCV1 151124RJS I:PB O:RJS

Analyte	Intensity	Mean Corrected	Calib.	Sample	Conc. Units	Std.Dev.	RSD
Y 371.029	767637.4	96.73 %	0.804				0.83%
Y 371.029 Radial	699230.7	95.84 %	0.839				0.88%
Ag 338.289†	26591.1	248.7 ug/L	1.58	248.7 ug/L	1.58	1.58	0.64%
QC value within limits for Ag 338.289 Recovery = 99.48%							
Al 308.215†	6137.0	9865 ug/L	412.7	9865 ug/L	412.7	412.7	4.18%
QC value within limits for Al 308.215 Recovery = 98.65%							
As 188.979†	1499.4	494.9 ug/L	3.93	494.9 ug/L	3.93	3.93	0.79%
QC value within limits for As 188.979 Recovery = 98.97%							
B†	21067.2	487.4 ug/L	7.04	487.4 ug/L	7.04	7.04	1.44%
QC value within limits for B Recovery = 97.49%							
Ba 233.527†	64651.7	497.6 ug/L	1.75	497.6 ug/L	1.75	1.75	0.35%
QC value within limits for Ba 233.527 Recovery = 99.52%							
Be 313.107†	106110.3	488.3 ug/L	28.14	488.3 ug/L	28.14	28.14	5.76%
QC value within limits for Be 313.107 Recovery = 97.65%							
Ca 315.887†	100011.2	24530 ug/L	1286.1	24530 ug/L	1286.1	1286.1	5.24%
QC value within limits for Ca 315.887 Recovery = 98.13%							
Cd 214.440†	98900.9	501.4 ug/L	1.38	501.4 ug/L	1.38	1.38	0.27%
QC value within limits for Cd 214.440 Recovery = 100.27%							
Co 228.616†	26534.3	498.6 ug/L	2.25	498.6 ug/L	2.25	2.25	0.45%
QC value within limits for Co 228.616 Recovery = 99.72%							
Cr 267.716†	42816.1	500.2 ug/L	2.09	500.2 ug/L	2.09	2.09	0.42%
QC value within limits for Cr 267.716 Recovery = 100.03%							
Cu 327.393†	52300.5	498.0 ug/L	1.76	498.0 ug/L	1.76	1.76	0.35%
QC value within limits for Cu 327.393 Recovery = 99.59%							
Fe 273.955†	175157.6	9963 ug/L	39.1	9963 ug/L	39.1	39.1	0.39%
QC value within limits for Fe 273.955 Recovery = 99.63%							
K 766.490†	25901.5	9932 ug/L	368.1	9932 ug/L	368.1	368.1	3.71%
QC value within limits for K 766.490 Recovery = 99.32%							
Mg 285.213†	195155.5	24860 ug/L	1253.7	24860 ug/L	1253.7	1253.7	5.04%
QC value within limits for Mg 285.213 Recovery = 99.43%							
Mn 257.610†	6125.8	497.8 ug/L	19.66	497.8 ug/L	19.66	19.66	3.95%
QC value within limits for Mn 257.610 Recovery = 99.56%							
Mo 202.031†	13947.3	485.4 ug/L	3.41	485.4 ug/L	3.41	3.41	0.70%
QC value within limits for Mo 202.031 Recovery = 97.08%							
Na 589.592†	85509.9	12210 ug/L	604.0	12210 ug/L	604.0	604.0	4.95%
QC value within limits for Na 589.592 Recovery = 97.67%							
Ni 231.604†	20537.6	496.6 ug/L	1.94	496.6 ug/L	1.94	1.94	0.39%
QC value within limits for Ni 231.604 Recovery = 99.33%							
P 213.617†	9355.0	2484 ug/L	19.7	2484 ug/L	19.7	19.7	0.79%
QC value within limits for P 213.617 Recovery = 99.34%							
Pb 220.353†	5332.2	507.9 ug/L	3.28	507.9 ug/L	3.28	3.28	0.65%
QC value within limits for Pb 220.353 Recovery = 101.58%							
Sb 206.836†	2122.9	498.3 ug/L	5.44	498.3 ug/L	5.44	5.44	1.09%
QC value within limits for Sb 206.836 Recovery = 99.66%							
Se 196.026†	1585.1	501.0 ug/L	1.39	501.0 ug/L	1.39	1.39	0.28%
QC value within limits for Se 196.026 Recovery = 100.19%							
Sn 189.927†	5021.9	505.4 ug/L	2.20	505.4 ug/L	2.20	2.20	0.44%
QC value within limits for Sn 189.927 Recovery = 101.09%							
Sr 421.552†	226346.4	491.3 ug/L	24.90	491.3 ug/L	24.90	24.90	5.07%
QC value within limits for Sr 421.552 Recovery = 98.26%							
Ti 337.279†	13104.8	492.0 ug/L	21.30	492.0 ug/L	21.30	21.30	4.33%
QC value within limits for Ti 337.279 Recovery = 98.40%							
Tl 190.801†	2479.1	507.6 ug/L	4.58	507.6 ug/L	4.58	4.58	0.90%
QC value within limits for Tl 190.801 Recovery = 101.51%							
V 292.402†	82756.6	506.2 ug/L	1.66	506.2 ug/L	1.66	1.66	0.33%
QC value within limits for V 292.402 Recovery = 101.23%							
Zn 206.200†	16785.1	488.2 ug/L	1.93	488.2 ug/L	1.93	1.93	0.40%
QC value within limits for Zn 206.200 Recovery = 97.64%							

Li 670.784 3227195.7 244.8 ug/L 1.27 244.8 ug/L 1.27 0.52%
QC value within limits for Li 670.784 Recovery = 97.90%
All analyte(s) passed QC.

Sequence No.: 11
 Sample ID: CCB 151124RJS I:PB O:RJS
 Analyst:
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt:
 Dilution:

Autosampler Location: 1
 Date Collected: 11/24/15 12:11:34 PM
 Data Type: Reprocessed on 11/25/15 9:10:46 AM

Initial Sample Vol:
 Sample Prep Vol:

Mean Data: CCB 151124RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	798902.8	100.7 %	0.59			0.59%
Y 371.029 Radial	734982.0	100.7 %	0.69			0.69%
Ag 338.289†	28.4	0.266 ug/L	0.2798	0.266 ug/L	0.2798	105.19%
QC value within limits for Ag 338.289	Recovery = Not calculated					
Al 308.215†	6.1	9.755 ug/L	7.1159	9.755 ug/L	7.1159	72.95%
QC value within limits for Al 308.215	Recovery = Not calculated					
As 188.979†	0.0	0.005 ug/L	1.3580	0.005 ug/L	1.3580	>999.9%
QC value within limits for As 188.979	Recovery = Not calculated					
B†	81.1	1.877 ug/L	0.0830	1.877 ug/L	0.0830	4.42%
QC value within limits for B	Recovery = Not calculated					
Ba 233.527†	6.1	0.047 ug/L	0.0836	0.047 ug/L	0.0836	176.44%
QC value within limits for Ba 233.527	Recovery = Not calculated					
Be 313.107†	15.2	0.070 ug/L	0.0216	0.070 ug/L	0.0216	30.88%
QC value within limits for Be 313.107	Recovery = Not calculated					
Ca 315.887†	0.2	0.035 ug/L	1.8830	0.035 ug/L	1.8830	>999.9%
QC value within limits for Ca 315.887	Recovery = Not calculated					
Cd 214.440†	40.6	0.206 ug/L	0.0255	0.206 ug/L	0.0255	12.38%
QC value within limits for Cd 214.440	Recovery = Not calculated					
Co 228.616†	14.8	0.279 ug/L	0.2429	0.279 ug/L	0.2429	87.19%
QC value within limits for Co 228.616	Recovery = Not calculated					
Cr 267.716†	7.0	0.083 ug/L	0.2284	0.083 ug/L	0.2284	274.18%
QC value within limits for Cr 267.716	Recovery = Not calculated					
Cu 327.393†	-73.4	-0.698 ug/L	0.4314	-0.698 ug/L	0.4314	61.82%
QC value within limits for Cu 327.393	Recovery = Not calculated					
Fe 273.955†	32.9	1.820 ug/L	1.0487	1.820 ug/L	1.0487	57.61%
QC value within limits for Fe 273.955	Recovery = Not calculated					
K 766.490†	86.4	33.19 ug/L	43.361	33.19 ug/L	43.361	130.65%
QC value within limits for K 766.490	Recovery = Not calculated					
Mg 285.213†	25.8	3.285 ug/L	1.2000	3.285 ug/L	1.2000	36.53%
QC value within limits for Mg 285.213	Recovery = Not calculated					
Mn 257.610†	-1.6	-0.128 ug/L	0.3488	-0.128 ug/L	0.3488	273.17%
QC value within limits for Mn 257.610	Recovery = Not calculated					
Mo 202.031†	17.2	0.598 ug/L	0.1528	0.598 ug/L	0.1528	25.56%
QC value within limits for Mo 202.031	Recovery = Not calculated					
Na 589.592†	-40.7	-5.851 ug/L	18.2895	-5.851 ug/L	18.2895	312.56%
QC value within limits for Na 589.592	Recovery = Not calculated					
Ni 231.604†	-5.4	-0.135 ug/L	0.2447	-0.135 ug/L	0.2447	180.99%
QC value within limits for Ni 231.604	Recovery = Not calculated					
P 213.617†	-3.8	-1.016 ug/L	1.8569	-1.016 ug/L	1.8569	182.77%
QC value within limits for P 213.617	Recovery = Not calculated					
Pb 220.353†	12.2	1.159 ug/L	1.4805	1.159 ug/L	1.4805	127.74%
QC value within limits for Pb 220.353	Recovery = Not calculated					
Sb 206.836†	2.6	0.619 ug/L	0.1931	0.619 ug/L	0.1931	31.21%
QC value within limits for Sb 206.836	Recovery = Not calculated					
Se 196.026†	5.6	1.762 ug/L	1.2053	1.762 ug/L	1.2053	68.40%
QC value within limits for Se 196.026	Recovery = Not calculated					
Sn 189.927†	14.5	1.452 ug/L	0.4392	1.452 ug/L	0.4392	30.25%
QC value within limits for Sn 189.927	Recovery = Not calculated					
Sr 421.552†	153.5	0.333 ug/L	0.0243	0.333 ug/L	0.0243	7.29%
QC value within limits for Sr 421.552	Recovery = Not calculated					
Ti 337.279†	12.9	0.483 ug/L	0.4974	0.483 ug/L	0.4974	102.88%
QC value within limits for Ti 337.279	Recovery = Not calculated					
Tl 190.801†	6.1	1.253 ug/L	0.3343	1.253 ug/L	0.3343	26.68%
QC value within limits for Tl 190.801	Recovery = Not calculated					
V 292.402†	116.1	0.707 ug/L	0.6387	0.707 ug/L	0.6387	90.37%
QC value within limits for V 292.402	Recovery = Not calculated					
Zn 206.200†	5.7	0.168 ug/L	0.1893	0.168 ug/L	0.1893	112.60%
QC value within limits for Zn 206.200	Recovery = Not calculated					

Li 670.784 101.3 0.008 ug/L 0.0135 0.008 ug/L 0.0135 175.09%
QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 30
 Sample ID: CCV2 151124RJS I:PB O:RJS
 Analyst:
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt:
 Dilution:

Autosampler Location: 8
 Date Collected: 11/24/15 1:38:00 PM
 Data Type: Reprocessed on 11/25/15 9:11:12 AM
 Initial Sample Vol:
 Sample Prep Vol:

Mean Data: CCV2 151124RJS I:PB O:RJS

Analyte	Intensity	Mean Corrected		Calib.	Std.Dev.	Sample		RSD
		Conc.	Units			Conc.	Units	
Y 371.029	777466.4	97.97	%	2.202				2.25%
Y 371.029 Radial	710956.1	97.44	%	2.432				2.50%
Ag 338.289†	20504.9	191.8	ug/L	4.42		191.8	ug/L	2.30%
QC value within limits for Ag 338.289		Recovery = 102.28%						
Al 308.215†	4637.5	7454	ug/L	292.9		7454	ug/L	292.9
QC value within limits for Al 308.215		Recovery = 99.38%						
As 188.979†	1137.7	375.5	ug/L	7.46		375.5	ug/L	7.46
QC value within limits for As 188.979		Recovery = 100.13%						
B†	15968.8	369.5	ug/L	7.93		369.5	ug/L	7.93
QC value within limits for B		Recovery = 98.53%						
Ba 233.527†	49903.5	384.1	ug/L	8.32		384.1	ug/L	8.32
QC value within limits for Ba 233.527		Recovery = 102.43%						
Be 313.107†	82848.6	381.2	ug/L	24.37		381.2	ug/L	24.37
QC value within limits for Be 313.107		Recovery = 101.66%						
Ca 315.887†	77720.5	19060	ug/L	1122.3		19060	ug/L	1122.3
QC value within limits for Ca 315.887		Recovery = 101.68%						
Cd 214.440†	76512.3	387.9	ug/L	8.09		387.9	ug/L	8.09
QC value within limits for Cd 214.440		Recovery = 103.43%						
Co 228.616†	20545.2	386.1	ug/L	7.85		386.1	ug/L	7.85
QC value within limits for Co 228.616		Recovery = 102.97%						
Cr 267.716†	32796.6	383.1	ug/L	8.83		383.1	ug/L	8.83
QC value within limits for Cr 267.716		Recovery = 102.16%						
Cu 327.393†	39842.9	379.4	ug/L	8.88		379.4	ug/L	8.88
QC value within limits for Cu 327.393		Recovery = 101.16%						
Fe 273.955†	135367.2	7700	ug/L	170.9		7700	ug/L	170.9
QC value within limits for Fe 273.955		Recovery = 102.67%						
K 766.490†	19218.1	7369	ug/L	327.7		7369	ug/L	327.7
QC value within limits for K 766.490		Recovery = 98.25%						
Mg 285.213†	150201.6	19130	ug/L	1151.0		19130	ug/L	1151.0
QC value within limits for Mg 285.213		Recovery = 102.04%						
Mn 257.610†	4598.2	373.7	ug/L	18.72		373.7	ug/L	18.72
QC value within limits for Mn 257.610		Recovery = 99.65%						
Mo 202.031†	10992.9	382.6	ug/L	6.99		382.6	ug/L	6.99
QC value within limits for Mo 202.031		Recovery = 102.03%						
Na 589.592†	65627.0	9369	ug/L	530.7		9369	ug/L	530.7
QC value within limits for Na 589.592		Recovery = 99.94%						
Ni 231.604†	15898.7	384.5	ug/L	8.11		384.5	ug/L	8.11
QC value within limits for Ni 231.604		Recovery = 102.53%						
P 213.617†	7203.1	1912	ug/L	40.9		1912	ug/L	40.9
QC value within limits for P 213.617		Recovery = 101.99%						
Pb 220.353†	4083.9	389.0	ug/L	8.50		389.0	ug/L	8.50
QC value within limits for Pb 220.353		Recovery = 103.74%						
Sb 206.836†	1641.6	385.3	ug/L	6.59		385.3	ug/L	6.59
QC value within limits for Sb 206.836		Recovery = 102.76%						
Se 196.026†	1225.2	387.2	ug/L	8.57		387.2	ug/L	8.57
QC value within limits for Se 196.026		Recovery = 103.25%						
Sn 189.927†	3838.0	386.3	ug/L	6.77		386.3	ug/L	6.77
QC value within limits for Sn 189.927		Recovery = 103.00%						
Sr 421.552†	174241.6	378.2	ug/L	23.10		378.2	ug/L	23.10
QC value within limits for Sr 421.552		Recovery = 100.85%						
Ti 337.279†	9871.7	370.6	ug/L	19.89		370.6	ug/L	19.89
QC value within limits for Ti 337.279		Recovery = 98.83%						
Tl 190.801†	1913.8	391.8	ug/L	8.09		391.8	ug/L	8.09
QC value within limits for Tl 190.801		Recovery = 104.49%						
V 292.402†	62985.3	385.4	ug/L	8.81		385.4	ug/L	8.81
QC value within limits for V 292.402		Recovery = 102.77%						
Zn 206.200†	13259.2	385.7	ug/L	8.94		385.7	ug/L	8.94
QC value within limits for Zn 206.200		Recovery = 102.85%						

Li 670.784 2440798.0 185.1 ug/L 1.03 185.1 ug/L 1.03 0.56%
QC value within limits for Li 670.784 Recovery = 98.73%
All analyte(s) passed QC.

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Sequence No.: 31
Sample ID: CCB 151124RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/24/15 1:41:24 PM
Data Type: Reprocessed on 11/25/15 9:11:14 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 151124RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	802761.9	101.2 %	1.07			1.06%
Y 371.029 Radial	738544.8	101.2 %	1.21			1.19%
Ag 338.289†	85.4	0.799 ug/L	0.5592	0.799 ug/L	0.5592	70.01%
QC value within limits for Ag 338.289 Recovery = Not calculated						
Al 308.215†	4.5	7.248 ug/L	12.8577	7.248 ug/L	12.8577	177.39%
QC value within limits for Al 308.215 Recovery = Not calculated						
As 188.979†	0.0	0.005 ug/L	0.3617	0.005 ug/L	0.3617	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated						
B†	136.8	3.165 ug/L	0.3799	3.165 ug/L	0.3799	12.00%
QC value within limits for B Recovery = Not calculated						
Ba 233.527†	21.4	0.165 ug/L	0.2049	0.165 ug/L	0.2049	123.84%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	18.5	0.085 ug/L	0.0295	0.085 ug/L	0.0295	34.61%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 315.887†	1.7	0.408 ug/L	1.6819	0.408 ug/L	1.6819	411.98%
QC value within limits for Ca 315.887 Recovery = Not calculated						
Cd 214.440†	33.6	0.171 ug/L	0.0641	0.171 ug/L	0.0641	37.47%
QC value within limits for Cd 214.440 Recovery = Not calculated						
Co 228.616†	9.3	0.178 ug/L	0.2177	0.178 ug/L	0.2177	122.45%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-2.3	-0.025 ug/L	0.2632	-0.025 ug/L	0.2632	>999.9%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 327.393†	-64.1	-0.609 ug/L	0.6981	-0.609 ug/L	0.6981	114.70%
QC value within limits for Cu 327.393 Recovery = Not calculated						
Fe 273.955†	26.9	1.474 ug/L	0.5306	1.474 ug/L	0.5306	36.01%
QC value within limits for Fe 273.955 Recovery = Not calculated						
K 766.490†	42.6	16.36 ug/L	16.597	16.36 ug/L	16.597	101.47%
QC value within limits for K 766.490 Recovery = Not calculated						
Mg 285.213†	27.6	3.510 ug/L	2.6503	3.510 ug/L	2.6503	75.52%
QC value within limits for Mg 285.213 Recovery = Not calculated						
Mn 257.610†	-2.6	-0.214 ug/L	0.2421	-0.214 ug/L	0.2421	113.38%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	42.5	1.480 ug/L	0.2007	1.480 ug/L	0.2007	13.56%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592†	167.8	24.02 ug/L	7.931	24.02 ug/L	7.931	33.02%
QC value within limits for Na 589.592 Recovery = Not calculated						
Ni 231.604†	-14.0	-0.344 ug/L	0.3346	-0.344 ug/L	0.3346	97.36%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 213.617†	4.3	1.131 ug/L	0.6232	1.131 ug/L	0.6232	55.09%
QC value within limits for P 213.617 Recovery = Not calculated						
Pb 220.353†	-6.2	-0.580 ug/L	1.2061	-0.580 ug/L	1.2061	208.05%
QC value within limits for Pb 220.353 Recovery = Not calculated						
Sb 206.836†	10.3	2.415 ug/L	1.3659	2.415 ug/L	1.3659	56.55%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	5.9	1.863 ug/L	0.8696	1.863 ug/L	0.8696	46.68%
QC value within limits for Se 196.026 Recovery = Not calculated						
Sn 189.927†	6.3	0.627 ug/L	0.5013	0.627 ug/L	0.5013	79.89%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	213.3	0.463 ug/L	0.1554	0.463 ug/L	0.1554	33.55%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 337.279†	10.6	0.397 ug/L	0.5686	0.397 ug/L	0.5686	143.10%
QC value within limits for Ti 337.279 Recovery = Not calculated						
Tl 190.801†	3.5	0.708 ug/L	0.5070	0.708 ug/L	0.5070	71.60%
QC value within limits for Tl 190.801 Recovery = Not calculated						
V 292.402†	122.2	0.755 ug/L	0.6801	0.755 ug/L	0.6801	90.14%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 206.200†	-32.5	-0.943 ug/L	0.3085	-0.943 ug/L	0.3085	32.73%
QC value within limits for Zn 206.200 Recovery = Not calculated						

Li 670.784 229.4 0.017 ug/L 0.0086 0.017 ug/L 0.0086 49.37%
QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 36
Sample ID: CCV1 151124RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 11/24/15 2:05:48 PM
Data Type: Reprocessed on 11/25/15 9:11:21 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 151124RJS I:PB O:RJS

Analyte	Mean Corrected		Calib.	Sample		Std.Dev.	RSD
	Intensity	Conc. Units	Std.Dev.	Conc. Units	Std.Dev.		
Y 371.029	786835.6	99.15 %	0.822				0.83%
Y 371.029 Radial	717745.6	98.38 %	0.958				0.97%
Ag 338.289†	26803.1	250.7 ug/L	3.61	250.7 ug/L	3.61	3.61	1.44%
QC value within limits for Ag 338.289	Recovery = 100.27%						
Al 308.215†	6315.5	10150 ug/L	63.3	10150 ug/L	63.3	63.3	0.62%
QC value within limits for Al 308.215	Recovery = 101.51%						
As 188.979†	1525.0	503.3 ug/L	5.37	503.3 ug/L	5.37	5.37	1.07%
QC value within limits for As 188.979	Recovery = 100.66%						
B†	21106.3	488.3 ug/L	6.78	488.3 ug/L	6.78	6.78	1.39%
QC value within limits for B	Recovery = 97.67%						
Ba 233.527†	64904.8	499.6 ug/L	8.03	499.6 ug/L	8.03	8.03	1.61%
QC value within limits for Ba 233.527	Recovery = 99.91%						
Be 313.107†	112972.4	519.8 ug/L	9.88	519.8 ug/L	9.88	9.88	1.90%
QC value within limits for Be 313.107	Recovery = 103.97%						
Ca 315.887†	105218.9	25810 ug/L	488.1	25810 ug/L	488.1	488.1	1.89%
QC value within limits for Ca 315.887	Recovery = 103.24%						
Cd 214.440†	99811.3	506.0 ug/L	7.35	506.0 ug/L	7.35	7.35	1.45%
QC value within limits for Cd 214.440	Recovery = 101.19%						
Co 228.616†	26673.9	501.2 ug/L	7.75	501.2 ug/L	7.75	7.75	1.55%
QC value within limits for Co 228.616	Recovery = 100.24%						
Cr 267.716†	42911.2	501.2 ug/L	6.41	501.2 ug/L	6.41	6.41	1.28%
QC value within limits for Cr 267.716	Recovery = 100.25%						
Cu 327.393†	51856.2	493.7 ug/L	6.50	493.7 ug/L	6.50	6.50	1.32%
QC value within limits for Cu 327.393	Recovery = 98.74%						
Fe 273.955†	175870.0	10000 ug/L	148.7	10000 ug/L	148.7	148.7	1.49%
QC value within limits for Fe 273.955	Recovery = 100.04%						
K 766.490†	26050.6	9989 ug/L	107.0	9989 ug/L	107.0	107.0	1.07%
QC value within limits for K 766.490	Recovery = 99.89%						
Mg 285.213†	202145.4	25750 ug/L	461.5	25750 ug/L	461.5	461.5	1.79%
QC value within limits for Mg 285.213	Recovery = 102.99%						
Mn 257.610†	6299.2	511.9 ug/L	4.14	511.9 ug/L	4.14	4.14	0.81%
QC value within limits for Mn 257.610	Recovery = 102.38%						
Mo 202.031†	14060.1	489.3 ug/L	6.47	489.3 ug/L	6.47	6.47	1.32%
QC value within limits for Mo 202.031	Recovery = 97.87%						
Na 589.592†	88157.4	12590 ug/L	253.4	12590 ug/L	253.4	253.4	2.01%
QC value within limits for Na 589.592	Recovery = 100.70%						
Ni 231.604†	20707.2	500.7 ug/L	5.70	500.7 ug/L	5.70	5.70	1.14%
QC value within limits for Ni 231.604	Recovery = 100.14%						
P 213.617†	9241.2	2453 ug/L	50.4	2453 ug/L	50.4	50.4	2.06%
QC value within limits for P 213.617	Recovery = 98.13%						
Pb 220.353†	5765.0	549.0 ug/L	4.31	549.0 ug/L	4.31	4.31	0.79%
QC value within limits for Pb 220.353	Recovery = 109.80%						
Sb 206.836†	2252.9	528.8 ug/L	3.82	528.8 ug/L	3.82	3.82	0.72%
QC value within limits for Sb 206.836	Recovery = 105.77%						
Se 196.026†	1639.6	518.2 ug/L	3.39	518.2 ug/L	3.39	3.39	0.65%
QC value within limits for Se 196.026	Recovery = 103.64%						
Sn 189.927†	5186.4	522.0 ug/L	5.40	522.0 ug/L	5.40	5.40	1.04%
QC value within limits for Sn 189.927	Recovery = 104.40%						
Sr 421.552†	235081.9	510.3 ug/L	10.87	510.3 ug/L	10.87	10.87	2.13%
QC value within limits for Sr 421.552	Recovery = 102.05%						
Ti 337.279†	13552.1	508.8 ug/L	1.66	508.8 ug/L	1.66	1.66	0.33%
QC value within limits for Ti 337.279	Recovery = 101.76%						
Tl 190.801†	2572.7	526.7 ug/L	3.70	526.7 ug/L	3.70	3.70	0.70%
QC value within limits for Tl 190.801	Recovery = 105.34%						
V 292.402†	82675.9	505.7 ug/L	7.87	505.7 ug/L	7.87	7.87	1.56%
QC value within limits for V 292.402	Recovery = 101.14%						
Zn 206.200†	16879.1	490.8 ug/L	6.88	490.8 ug/L	6.88	6.88	1.40%
QC value within limits for Zn 206.200	Recovery = 98.16%						

Li 670.784 3325240.1 252.2 ug/L 2.43 252.2 ug/L 2.43 0.96%
QC value within limits for Li 670.784 Recovery = 100.88%
All analyte(s) passed QC.

Sequence No.: 37
 Sample ID: CCB 151124RJS I:PB O:RJS
 Analyst:
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt:
 Dilution:

Autosampler Location: 1
 Date Collected: 11/24/15 2:12:12 PM
 Data Type: Reprocessed on 11/25/15 9:11:22 AM
 Initial Sample Vol:
 Sample Prep Vol:

Mean Data: CCB 151124RJS I:PB O:RJS

Analyte	Mean Corrected		Calib.	Std.Dev.	Sample		RSD
	Intensity	Conc. Units			Conc. Units	Std.Dev.	
Y 371.029	806172.7	101.6 %	1.22				1.20%
Y 371.029 Radial	740657.1	101.5 %	1.35				1.33%
Ag 338.289†	80.8	0.756 ug/L	0.1304	0.756 ug/L	0.1304	0.1304	17.26%
QC value within limits for Ag 338.289 Recovery = Not calculated							
Al 308.215†	10.8	17.42 ug/L	11.790	17.42 ug/L	11.790	11.790	67.70%
QC value within limits for Al 308.215 Recovery = Not calculated							
As 188.979†	-2.2	-0.717 ug/L	0.4668	-0.717 ug/L	0.4668	0.4668	65.10%
QC value within limits for As 188.979 Recovery = Not calculated							
B†	150.4	3.480 ug/L	0.3261	3.480 ug/L	0.3261	0.3261	9.37%
QC value within limits for B Recovery = Not calculated							
Ba 233.527†	10.8	0.083 ug/L	0.0468	0.083 ug/L	0.0468	0.0468	56.29%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	11.3	0.052 ug/L	0.0098	0.052 ug/L	0.0098	0.0098	18.93%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 315.887†	129.7	31.83 ug/L	2.394	31.83 ug/L	2.394	2.394	7.52%
QC value within limits for Ca 315.887 Recovery = Not calculated							
Cd 214.440†	2.8	0.015 ug/L	0.0362	0.015 ug/L	0.0362	0.0362	244.40%
QC value within limits for Cd 214.440 Recovery = Not calculated							
Co 228.616†	5.8	0.111 ug/L	0.0722	0.111 ug/L	0.0722	0.0722	65.20%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-9.2	-0.107 ug/L	0.1289	-0.107 ug/L	0.1289	0.1289	120.72%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 327.393†	9.9	0.095 ug/L	0.2541	0.095 ug/L	0.2541	0.2541	267.96%
QC value within limits for Cu 327.393 Recovery = Not calculated							
Fe 273.955†	44.3	2.456 ug/L	0.9339	2.456 ug/L	0.9339	0.9339	38.02%
QC value within limits for Fe 273.955 Recovery = Not calculated							
K 766.490†	36.4	13.96 ug/L	69.219	13.96 ug/L	69.219	69.219	495.99%
QC value within limits for K 766.490 Recovery = Not calculated							
Mg 285.213†	30.0	3.814 ug/L	0.7472	3.814 ug/L	0.7472	0.7472	19.59%
QC value within limits for Mg 285.213 Recovery = Not calculated							
Mn 257.610†	-2.4	-0.193 ug/L	0.0837	-0.193 ug/L	0.0837	0.0837	43.32%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	25.3	0.881 ug/L	0.2829	0.881 ug/L	0.2829	0.2829	32.11%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592†	240.8	34.49 ug/L	8.903	34.49 ug/L	8.903	8.903	25.82%
QC value within limits for Na 589.592 Recovery = Not calculated							
Ni 231.604†	-5.5	-0.135 ug/L	0.1357	-0.135 ug/L	0.1357	0.1357	100.20%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 213.617†	5.9	1.555 ug/L	1.0303	1.555 ug/L	1.0303	1.0303	66.24%
QC value within limits for P 213.617 Recovery = Not calculated							
Pb 220.353†	273.0	25.92 ug/L	2.729	25.92 ug/L	2.729	2.729	10.53%
QC value greater than the upper limit for Pb 220.353 Recovery = Not calculated							
Sb 206.836†	-2.8	-0.651 ug/L	1.0207	-0.651 ug/L	1.0207	1.0207	156.86%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-0.3	-0.097 ug/L	0.2919	-0.097 ug/L	0.2919	0.2919	302.27%
QC value within limits for Se 196.026 Recovery = Not calculated							
Sn 189.927†	6.7	0.669 ug/L	0.4050	0.669 ug/L	0.4050	0.4050	60.56%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	235.1	0.510 ug/L	0.0606	0.510 ug/L	0.0606	0.0606	11.87%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 337.279†	9.5	0.358 ug/L	0.3134	0.358 ug/L	0.3134	0.3134	87.46%
QC value within limits for Ti 337.279 Recovery = Not calculated							
Tl 190.801†	1.8	0.373 ug/L	0.3691	0.373 ug/L	0.3691	0.3691	98.99%
QC value within limits for Tl 190.801 Recovery = Not calculated							
V 292.402†	149.1	0.908 ug/L	0.1747	0.908 ug/L	0.1747	0.1747	19.24%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 206.200†	-37.4	-1.086 ug/L	0.5949	-1.086 ug/L	0.5949	0.5949	54.76%
QC value within limits for Zn 206.200 Recovery = Not calculated							

Li 670.784 349.4 0.027 ug/L 0.0134 0.027 ug/L 0.0134 50.60%
QC value within limits for Li 670.784 Recovery = Not calculated
QC Failed. Continue with analysis.

=====
Sequence No.: 48 Autosampler Location: 8
Sample ID: CCV2 151124RJS I:PB O:RJS Date Collected: 11/24/15 3:04:19 PM
Analyst: Data Type: Reprocessed on 11/25/15 9:11:38 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: CCV2 151124RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
Y 371.029	792286.6	99.84 %		0.711			0.71%
Y 371.029 Radial	725137.3	99.39 %		0.779			0.78%
Ag 338.289†	20505.6	191.8 ug/L		1.73	191.8 ug/L	1.73	0.90%
QC value within limits for Ag 338.289 Recovery = 102.28%							
Al 308.215†	4826.6	7757 ug/L		21.3	7757 ug/L	21.3	0.27%
QC value within limits for Al 308.215 Recovery = 103.43%							
As 188.979†	1123.0	370.6 ug/L		4.48	370.6 ug/L	4.48	1.21%
QC value within limits for As 188.979 Recovery = 98.84%							
B†	15258.6	353.0 ug/L		2.01	353.0 ug/L	2.01	0.57%
QC value within limits for B Recovery = 94.15%							
Ba 233.527†	48998.6	377.1 ug/L		3.10	377.1 ug/L	3.10	0.82%
QC value within limits for Ba 233.527 Recovery = 100.57%							
Be 313.107†	85452.3	393.2 ug/L		21.61	393.2 ug/L	21.61	5.49%
QC value within limits for Be 313.107 Recovery = 104.85%							
Ca 315.887†	79005.7	19380 ug/L		987.3	19380 ug/L	987.3	5.09%
QC value within limits for Ca 315.887 Recovery = 103.36%							
Cd 214.440†	75412.8	382.3 ug/L		3.17	382.3 ug/L	3.17	0.83%
QC value within limits for Cd 214.440 Recovery = 101.94%							
Co 228.616†	20328.9	382.0 ug/L		3.97	382.0 ug/L	3.97	1.04%
QC value within limits for Co 228.616 Recovery = 101.87%							
Cr 267.716†	32316.5	377.5 ug/L		3.04	377.5 ug/L	3.04	0.80%
QC value within limits for Cr 267.716 Recovery = 100.66%							
Cu 327.393†	39047.5	371.8 ug/L		3.50	371.8 ug/L	3.50	0.94%
QC value within limits for Cu 327.393 Recovery = 99.14%							
Fe 273.955†	133247.5	7580 ug/L		61.9	7580 ug/L	61.9	0.82%
QC value within limits for Fe 273.955 Recovery = 101.06%							
K 766.490†	19472.4	7467 ug/L		64.0	7467 ug/L	64.0	0.86%
QC value within limits for K 766.490 Recovery = 99.56%							
Mg 285.213†	151642.2	19320 ug/L		973.9	19320 ug/L	973.9	5.04%
QC value within limits for Mg 285.213 Recovery = 103.02%							
Mn 257.610†	4835.9	393.0 ug/L		5.31	393.0 ug/L	5.31	1.35%
QC value within limits for Mn 257.610 Recovery = 104.80%							
Mo 202.031†	10927.1	380.3 ug/L		4.09	380.3 ug/L	4.09	1.07%
QC value within limits for Mo 202.031 Recovery = 101.41%							
Na 589.592†	65309.4	9325 ug/L		469.2	9325 ug/L	469.2	5.03%
QC value within limits for Na 589.592 Recovery = 99.46%							
Ni 231.604†	15753.8	380.9 ug/L		3.52	380.9 ug/L	3.52	0.93%
QC value within limits for Ni 231.604 Recovery = 101.58%							
P 213.617†	7280.4	1933 ug/L		15.0	1933 ug/L	15.0	0.78%
QC value within limits for P 213.617 Recovery = 103.08%							
Pb 220.353†	4318.5	411.3 ug/L		3.60	411.3 ug/L	3.60	0.88%
QC value within limits for Pb 220.353 Recovery = 109.69%							
Sb 206.836†	1634.7	383.7 ug/L		3.20	383.7 ug/L	3.20	0.83%
QC value within limits for Sb 206.836 Recovery = 102.32%							
Se 196.026†	1216.7	384.5 ug/L		3.04	384.5 ug/L	3.04	0.79%
QC value within limits for Se 196.026 Recovery = 102.55%							
Sn 189.927†	3812.3	383.8 ug/L		3.25	383.8 ug/L	3.25	0.85%
QC value within limits for Sn 189.927 Recovery = 102.35%							
Sr 421.552†	175015.2	379.9 ug/L		19.03	379.9 ug/L	19.03	5.01%
QC value within limits for Sr 421.552 Recovery = 101.30%							
Ti 337.279†	10328.9	387.8 ug/L		2.41	387.8 ug/L	2.41	0.62%
QC value within limits for Ti 337.279 Recovery = 103.41%							
Tl 190.801†	1949.4	399.1 ug/L		4.14	399.1 ug/L	4.14	1.04%
QC value within limits for Tl 190.801 Recovery = 106.43%							
V 292.402†	62244.6	380.9 ug/L		2.38	380.9 ug/L	2.38	0.62%
QC value within limits for V 292.402 Recovery = 101.57%							
Zn 206.200†	12660.1	368.1 ug/L		3.53	368.1 ug/L	3.53	0.96%
QC value within limits for Zn 206.200 Recovery = 98.15%							

Li 670.784 2477653.6 187.9 ug/L 1.85 187.9 ug/L 1.85 0.99%
QC value within limits for Li 670.784 Recovery = 100.22%
All analyte(s) passed QC.

Sequence No.: 49
 Sample ID: CCB 151124RJS I:PB O:RJS
 Analyst:
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt:
 Dilution:

Autosampler Location: 1
 Date Collected: 11/24/15 3:14:59 PM
 Data Type: Reprocessed on 11/25/15 9:11:40 AM
 Initial Sample Vol:
 Sample Prep Vol:

Mean Data: CCB 151124RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	808511.8	101.9 %	0.55		0.54%
Y 371.029 Radial	743719.8	101.9 %	0.60		0.59%
Ag 338.289†	28.4	0.266 ug/L	0.6281	0.266 ug/L	0.6281 236.04%
QC value within limits for Ag 338.289 Recovery = Not calculated					
Al 308.215†	1.4	2.308 ug/L	15.7434	2.308 ug/L	15.7434 682.16%
QC value within limits for Al 308.215 Recovery = Not calculated					
As 188.979†	-0.4	-0.136 ug/L	1.0103	-0.136 ug/L	1.0103 745.00%
QC value within limits for As 188.979 Recovery = Not calculated					
B†	54.4	1.259 ug/L	0.1670	1.259 ug/L	0.1670 13.27%
QC value within limits for B Recovery = Not calculated					
Ba 233.527†	4.9	0.038 ug/L	0.0369	0.038 ug/L	0.0369 97.49%
QC value within limits for Ba 233.527 Recovery = Not calculated					
Be 313.107†	11.0	0.051 ug/L	0.0180	0.051 ug/L	0.0180 35.37%
QC value within limits for Be 313.107 Recovery = Not calculated					
Ca 315.887†	64.7	15.88 ug/L	2.683	15.88 ug/L	2.683 16.89%
QC value within limits for Ca 315.887 Recovery = Not calculated					
Cd 214.440†	-7.1	-0.036 ug/L	0.0280	-0.036 ug/L	0.0280 77.78%
QC value within limits for Cd 214.440 Recovery = Not calculated					
Co 228.616†	-15.1	-0.285 ug/L	0.1915	-0.285 ug/L	0.1915 67.30%
QC value within limits for Co 228.616 Recovery = Not calculated					
Cr 267.716†	-1.2	-0.013 ug/L	0.1782	-0.013 ug/L	0.1782 >999.9%
QC value within limits for Cr 267.716 Recovery = Not calculated					
Cu 327.393†	-109.5	-1.041 ug/L	0.4503	-1.041 ug/L	0.4503 43.27%
QC value within limits for Cu 327.393 Recovery = Not calculated					
Fe 273.955†	29.1	1.620 ug/L	0.9680	1.620 ug/L	0.9680 59.75%
QC value within limits for Fe 273.955 Recovery = Not calculated					
K 766.490†	-61.1	-23.46 ug/L	20.600	-23.46 ug/L	20.600 87.82%
QC value within limits for K 766.490 Recovery = Not calculated					
Mg 285.213†	12.9	1.646 ug/L	0.9353	1.646 ug/L	0.9353 56.84%
QC value within limits for Mg 285.213 Recovery = Not calculated					
Mn 257.610†	1.9	0.155 ug/L	0.2635	0.155 ug/L	0.2635 170.10%
QC value within limits for Mn 257.610 Recovery = Not calculated					
Mo 202.031†	15.1	0.527 ug/L	0.2362	0.527 ug/L	0.2362 44.84%
QC value within limits for Mo 202.031 Recovery = Not calculated					
Na 589.592†	156.8	22.48 ug/L	6.160	22.48 ug/L	6.160 27.41%
QC value within limits for Na 589.592 Recovery = Not calculated					
Ni 231.604†	-12.1	-0.294 ug/L	0.4642	-0.294 ug/L	0.4642 158.09%
QC value within limits for Ni 231.604 Recovery = Not calculated					
P 213.617†	16.0	4.235 ug/L	0.8174	4.235 ug/L	0.8174 19.30%
QC value within limits for P 213.617 Recovery = Not calculated					
Pb 220.353†	214.5	20.37 ug/L	0.901	20.37 ug/L	0.901 4.43%
QC value greater than the upper limit for Pb 220.353 Recovery = Not calculated					
Sb 206.836†	1.4	0.336 ug/L	0.3950	0.336 ug/L	0.3950 117.39%
QC value within limits for Sb 206.836 Recovery = Not calculated					
Se 196.026†	3.6	1.146 ug/L	1.0772	1.146 ug/L	1.0772 93.99%
QC value within limits for Se 196.026 Recovery = Not calculated					
Sn 189.927†	-3.7	-0.369 ug/L	0.4823	-0.369 ug/L	0.4823 130.76%
QC value within limits for Sn 189.927 Recovery = Not calculated					
Sr 421.552†	167.5	0.363 ug/L	0.1072	0.363 ug/L	0.1072 29.48%
QC value within limits for Sr 421.552 Recovery = Not calculated					
Ti 337.279†	15.4	0.577 ug/L	0.2323	0.577 ug/L	0.2323 40.25%
QC value within limits for Ti 337.279 Recovery = Not calculated					
Tl 190.801†	0.9	0.186 ug/L	0.8906	0.186 ug/L	0.8906 479.79%
QC value within limits for Tl 190.801 Recovery = Not calculated					
V 292.402†	84.3	0.514 ug/L	0.0369	0.514 ug/L	0.0369 7.18%
QC value within limits for V 292.402 Recovery = Not calculated					
Zn 206.200†	-55.9	-1.627 ug/L	0.0981	-1.627 ug/L	0.0981 6.03%
QC value within limits for Zn 206.200 Recovery = Not calculated					

Li 670.784 456.4 0.035 ug/L 0.0190 0.035 ug/L 0.0190 54.83%
QC value within limits for Li 670.784 Recovery = Not calculated
QC Failed. Continue with analysis.

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Reprocessing Begun

Logged In Analyst: chemist_metals

Technique: ICP Continuous

Results Data Set (original): 151125A2007X

Results Library (original): C:\PE\chemist\RESULTS\Results.mdb

Results Data Set (reprocessed):

Results Library (reprocessed):

=====

Sequence No.: 1

Sample ID: CalBlk 151125RJS I:PB O:R

Analyst:

Logged In Analyst (Original) : chemist_metals

Initial Sample Wt:

Dilution:

Autosampler Location: 1

Date Collected: 11/25/15 12:44:34 PM

Data Type: Reprocessed on 11/30/15 9:43:20 AM

Initial Sample Vol:

Sample Prep Vol:

Mean Data: CalBlk 151125RJS I:PB O:R

Mean Corrected

Analyte	Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	805367.9	5778.09	0.72%	100.0	%
Y 371.029 Radial	740833.3	5662.52	0.76%	100.0	%
Ag 338.289†	-329.0	69.85	21.23%	[0.00]	ug/L
Al 308.215†	46.4	3.11	6.70%	[0.00]	ug/L
As 188.979†	4.7	1.78	37.43%	[0.00]	ug/L
B†	-114.7	7.93	6.92%	[0.00]	ug/L
Ba 233.527†	162.8	7.55	4.64%	[0.00]	ug/L
Be 313.107†	-78.3	4.20	5.37%	[0.00]	ug/L
Ca 315.887†	76.4	3.86	5.05%	[0.00]	ug/L
Cd 214.440†	223.4	14.36	6.42%	[0.00]	ug/L
Co 228.616†	91.7	18.70	20.40%	[0.00]	ug/L
Cr 267.716†	283.0	10.59	3.74%	[0.00]	ug/L
Cu 327.393†	336.6	66.53	19.77%	[0.00]	ug/L
Fe 273.955†	-225.5	10.76	4.77%	[0.00]	ug/L
K 766.490†	-333.5	17.82	5.34%	[0.00]	ug/L
Mg 285.213†	-41.4	9.93	24.00%	[0.00]	ug/L
Mn 257.610†	-67.4	4.97	7.38%	[0.00]	ug/L
Mo 202.031†	79.3	11.23	14.16%	[0.00]	ug/L
Na 589.592†	223.6	98.68	44.14%	[0.00]	ug/L
Ni 231.604†	30.5	10.90	35.80%	[0.00]	ug/L
P 213.617†	-8.9	2.13	24.04%	[0.00]	ug/L
Pb 220.353†	30.4	17.15	56.38%	[0.00]	ug/L
Sb 206.836†	-15.4	1.22	7.91%	[0.00]	ug/L
Se 196.026†	8.0	2.63	32.81%	[0.00]	ug/L
Sn 189.927†	22.5	7.05	31.30%	[0.00]	ug/L
Sr 421.552†	220.2	48.67	22.10%	[0.00]	ug/L
Ti 337.279†	-226.3	3.40	1.50%	[0.00]	ug/L
Tl 190.801†	-6.9	2.25	32.60%	[0.00]	ug/L
V 292.402†	-488.2	112.23	22.99%	[0.00]	ug/L
Zn 206.200†	-743.2	7.90	1.06%	[0.00]	ug/L
Li 670.784	1292.4	60.17	4.66%	[0.00]	ug/L

=====
Sequence No.: 2
Sample ID: STD 1 151125RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

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Autosampler Location: 2
Date Collected: 11/25/15 12:48:52 PM
Data Type: Reprocessed on 11/30/15 9:43:21 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 1 151125RJS I:PB O:RJ

Analyte	Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	804638.6	7868.79	0.98%	99.91	%
Y 371.029 Radial	740683.4	8012.13	1.08%	99.98	%
Ag 338.289†	53.8	82.28	153.07%	[0.5]	ug/L
Al 308.215†	31.7	14.42	45.55%	[50]	ug/L
As 188.979†	5.6	1.05	18.58%	[2]	ug/L
B†	1216.1	5.63	0.46%	[25]	ug/L
Ba 233.527†	178.9	10.54	5.89%	[1.5]	ug/L
Be 313.107†	207.9	2.21	1.06%	[1]	ug/L
Ca 315.887†	127.7	13.16	10.31%	[50]	ug/L
Cd 214.440†	60.1	29.67	49.35%	[0.25]	ug/L
Co 228.616†	152.6	20.76	13.61%	[2.5]	ug/L
Cr 267.716†	58.0	9.49	16.37%	[0.5]	ug/L
Cu 327.393†	302.7	61.60	20.35%	[2.5]	ug/L
Fe 273.955†	441.0	8.21	1.86%	[25]	ug/L
K 766.490†	1268.5	78.16	6.16%	[25]	ug/L
Mg 285.213†	185.3	5.13	2.77%	[25]	ug/L
Mn 257.610†	11.5	5.95	51.77%	[1]	ug/L
Mo 202.031†	20.0	8.65	43.14%	[1]	ug/L
Na 589.592†	3134.2	147.34	4.70%	[500]	ug/L
Ni 231.604†	14.2	5.86	41.33%	[1]	ug/L
P 213.617†	48.5	2.00	4.12%	[12.5]	ug/L
Pb 220.353†	30.4	10.18	33.52%	[1.5]	ug/L
Sb 206.836†	3.0	2.00	66.58%	[2]	ug/L
Se 196.026†	1.3	1.78	139.06%	[2]	ug/L
Sn 189.927†	28.4	3.49	12.31%	[3]	ug/L
Sr 421.552†	454.9	70.41	15.48%	[1]	ug/L
Ti 337.279†	49.0	13.77	28.13%	[2.5]	ug/L
Tl 190.801†	10.0	3.63	36.41%	[2]	ug/L
V 292.402†	47.9	36.28	75.77%	[0.5]	ug/L
Zn 206.200†	951.8	19.49	2.05%	[25]	ug/L
Li 670.784	53409.7	233.65	0.44%	[5]	ug/L

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Sequence No.: 3 Autosampler Location: 3
Sample ID: STD 2 151125RJS I:PB O:RJ Date Collected: 11/25/15 12:53:12 PM
Analyst: Data Type: Reprocessed on 11/30/15 9:43:23 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 2 151125RJS I:PB O:RJ

Mean Corrected

Analyte	Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	778805.6	6243.70	0.80%	96.70	%
Y 371.029 Radial	709689.7	5995.37	0.84%	95.80	%
Ag 338.289†	26675.0	367.98	1.38%	[250]	ug/L
Al 308.215†	6216.8	101.77	1.64%	[10000]	ug/L
As 188.979†	1556.9	20.80	1.34%	[500]	ug/L
B†	21900.8	353.45	1.61%	[500]	ug/L
Ba 233.527†	64773.4	636.09	0.98%	[500]	ug/L
Be 313.107†	105690.6	2361.47	2.23%	[500]	ug/L
Ca 315.887†	101673.6	2395.72	2.36%	[25000]	ug/L
Cd 214.440†	99562.7	1115.11	1.12%	[500]	ug/L
Co 228.616†	26710.2	307.46	1.15%	[500]	ug/L
Cr 267.716†	43391.7	484.24	1.12%	[500]	ug/L
Cu 327.393†	53128.9	690.35	1.30%	[500]	ug/L
Fe 273.955†	176308.9	1898.71	1.08%	[10000]	ug/L
K 766.490†	26625.3	375.47	1.41%	[10000]	ug/L
Mg 285.213†	198612.9	4625.75	2.33%	[25000]	ug/L
Mn 257.610†	6177.3	109.78	1.78%	[500]	ug/L
Mo 202.031†	13901.4	230.03	1.65%	[500]	ug/L
Na 589.592†	86094.8	2477.98	2.88%	[12500]	ug/L
Ni 231.604†	20801.1	263.67	1.27%	[500]	ug/L
P 213.617†	9362.9	86.23	0.92%	[2500]	ug/L
Pb 220.353†	5398.1	64.58	1.20%	[500]	ug/L
Sb 206.836†	2242.1	25.57	1.14%	[500]	ug/L
Se 196.026†	1577.0	13.80	0.88%	[500]	ug/L
Sn 189.927†	5081.3	53.58	1.05%	[500]	ug/L
Sr 421.552†	228644.1	5878.23	2.57%	[500]	ug/L
Ti 337.279†	13387.3	254.94	1.90%	[500]	ug/L
Tl 190.801†	2358.3	23.57	1.00%	[500]	ug/L
V 292.402†	84089.3	713.03	0.85%	[500]	ug/L
Zn 206.200†	17026.2	194.77	1.14%	[500]	ug/L
Li 670.784	3200248.5	35092.79	1.10%	[250]	ug/L

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Sequence No.: 4
Sample ID: STD 3 151125RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

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Autosampler Location: 4
Date Collected: 11/25/15 12:56:36 PM
Data Type: Reprocessed on 11/30/15 9:43:24 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD 3 151125RJS I:PB O:RJ

Analyte	Intensity	Std.Dev.	RSD	Conc.	Calib Units
Y 371.029	758752.5	6896.97	0.91%	94.21	%
Y 371.029 Radial	692394.0	6840.10	0.99%	93.46	%
Ag 338.289†	52741.8	869.22	1.65%	[500]	ug/L
Al 308.215†	12149.6	44.34	0.36%	[20000]	ug/L
As 188.979†	3086.1	39.51	1.28%	[1000]	ug/L
B†	43649.2	1351.83	3.10%	[1000]	ug/L
Ba 233.527†	126856.3	3026.58	2.39%	[1000]	ug/L
Be 313.107†	204103.8	5076.52	2.49%	[1000]	ug/L
Ca 315.887†	195808.4	3983.63	2.03%	[50000]	ug/L
Cd 214.440†	194331.2	4582.06	2.36%	[1000]	ug/L
Co 228.616†	52052.1	1211.85	2.33%	[1000]	ug/L
Cr 267.716†	84841.5	2194.66	2.59%	[1000]	ug/L
Cu 327.393†	105036.0	2648.73	2.52%	[1000]	ug/L
Fe 273.955†	343916.6	8853.27	2.57%	[20000]	ug/L
K 766.490†	52325.7	150.96	0.29%	[20000]	ug/L
Mg 285.213†	377948.8	7746.32	2.05%	[50000]	ug/L
Mn 257.610†	12015.1	33.62	0.28%	[1000]	ug/L
Mo 202.031†	28881.7	529.38	1.83%	[1000]	ug/L
Na 589.592†	166192.2	3822.28	2.30%	[25000]	ug/L
Ni 231.604†	40757.2	942.18	2.31%	[1000]	ug/L
P 213.617†	18695.7	296.36	1.59%	[5000]	ug/L
Pb 220.353†	10570.8	140.85	1.33%	[1000]	ug/L
Sb 206.836†	4447.4	72.88	1.64%	[1000]	ug/L
Se 196.026†	3136.8	43.98	1.40%	[1000]	ug/L
Sn 189.927†	10049.4	158.08	1.57%	[1000]	ug/L
Sr 421.552†	440725.2	9345.34	2.12%	[1000]	ug/L
Ti 337.279†	26261.7	123.55	0.47%	[1000]	ug/L
Tl 190.801†	4650.4	95.09	2.04%	[1000]	ug/L
V 292.402†	165539.2	3959.08	2.39%	[1000]	ug/L
Zn 206.200†	34972.7	463.33	1.32%	[1000]	ug/L
Li 670.784	6499624.3	113425.12	1.75%	[500]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 338.289	3	Lin Thru 0	0.0	105.7	0.00000	0.999989	
Al 308.215	3	Lin Thru 0	0.0	0.6103	0.00000	0.999957	
As 188.979	3	Lin Thru 0	0.0	3.092	0.00000	0.999994	
B	3	Lin Thru 0	0.0	43.68	0.00000	0.999996	
Ba 233.527	3	Lin Thru 0	0.0	127.4	0.00000	0.999964	
Be 313.107	3	Lin Thru 0	0.0	205.6	0.00000	0.999900	
Ca 315.887	3	Lin Thru 0	0.0	3.946	0.00000	0.999883	
Cd 214.440	3	Lin Thru 0	0.0	195.3	0.00000	0.999952	
Co 228.616	3	Lin Thru 0	0.0	52.33	0.00000	0.999945	
Cr 267.716	3	Lin Thru 0	0.0	85.23	0.00000	0.999958	
Cu 327.393	3	Lin Thru 0	0.0	105.3	0.00000	0.999989	
Fe 273.955	3	Lin Thru 0	0.0	17.28	0.00000	0.999949	
K 766.490	3	Lin Thru 0	0.0	2.626	0.00000	0.999765	
Mg 285.213	3	Lin Thru 0	0.0	7.636	0.00000	0.999796	
Mn 257.610	3	Lin Thru 0	0.0	12.08	0.00000	0.999937	
Mo 202.031	3	Lin Thru 0	0.0	28.67	0.00000	0.999887	
Na 589.592	3	Lin Thru 0	0.0	6.696	0.00000	0.999897	
Ni 231.604	3	Lin Thru 0	0.0	40.93	0.00000	0.999966	
P 213.617	3	Lin Thru 0	0.0	3.740	0.00000	1.000000	
Pb 220.353	3	Lin Thru 0	0.0	10.62	0.00000	0.999963	
Sb 206.836	3	Lin Thru 0	0.0	4.455	0.00000	0.999994	
Se 196.026	3	Lin Thru 0	0.0	3.140	0.00000	0.999997	

Sn 189.927	3	Lin Thru 0	0.0	10.07	0.00000	0.999990
Sr 421.552	3	Lin Thru 0	0.0	444.0	0.00000	0.999889
Ti 337.279	3	Lin Thru 0	0.0	26.36	0.00000	0.999970
Tl 190.801	3	Lin Thru 0	0.0	4.664	0.00000	0.999984
V 292.402	3	Lin Thru 0	0.0	166.1	0.00000	0.999980
Zn 206.200	3	Lin Thru 0	0.0	34.79	0.00000	0.999942
Li 670.784	3	Lin Thru 0	0.0	12960	0.00000	0.999980

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Sequence No.: 5
Sample ID: ICV 151125RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 11/25/15 1:00:02 PM
Data Type: Reprocessed on 11/30/15 9:43:26 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICV 151125RJS I:PB O:RJS

Analyte	Intensity	Calib.	Sample
	Mean Corrected	Conc. Units	Conc. Units
		Std.Dev.	Std.Dev.
Y 371.029	785313.1	97.51 %	0.593
Y 371.029 Radial	716669.5	96.74 %	0.642
Ag 338.289†	25415.6	240.4 ug/L	1.25
QC value within limits for Ag 338.289 Recovery = 96.16%			
Al 308.215†	7707.7	12640 ug/L	206.9
QC value within limits for Al 308.215 Recovery = 101.09%			
As 188.979†	1482.7	479.6 ug/L	2.92
QC value within limits for As 188.979 Recovery = 95.92%			
B†	23824.3	545.4 ug/L	1.85
QC value within limits for B Recovery = 109.08%			
Ba 233.527†	66791.6	522.2 ug/L	1.05
QC value within limits for Ba 233.527 Recovery = 104.45%			
Be 313.107†	107780.0	524.3 ug/L	9.58
QC value within limits for Be 313.107 Recovery = 104.87%			
Ca 315.887†	52957.0	13420 ug/L	225.3
QC value within limits for Ca 315.887 Recovery = 107.32%			
Cd 214.440†	103180.4	528.1 ug/L	0.83
QC value within limits for Cd 214.440 Recovery = 105.62%			
Co 228.616†	28842.1	549.6 ug/L	0.55
QC value within limits for Co 228.616 Recovery = 109.92%			
Cr 267.716†	44748.7	524.4 ug/L	0.84
QC value within limits for Cr 267.716 Recovery = 104.88%			
Cu 327.393†	54946.0	522.5 ug/L	3.32
QC value within limits for Cu 327.393 Recovery = 104.49%			
Fe 273.955†	220697.6	12720 ug/L	14.0
QC value within limits for Fe 273.955 Recovery = 101.79%			
K 766.490†	33154.2	12620 ug/L	266.4
QC value within limits for K 766.490 Recovery = 100.93%			
Mg 285.213†	99726.5	13070 ug/L	188.9
QC value within limits for Mg 285.213 Recovery = 104.58%			
Mn 257.610†	6304.7	522.1 ug/L	8.38
QC value within limits for Mn 257.610 Recovery = 104.43%			
Mo 202.031†	13809.4	481.9 ug/L	1.33
QC value within limits for Mo 202.031 Recovery = 96.39%			
Na 589.592†	88353.1	13130 ug/L	251.9
QC value within limits for Na 589.592 Recovery = 105.05%			
Ni 231.604†	22568.6	548.5 ug/L	1.15
QC value within limits for Ni 231.604 Recovery = 109.69%			
P 213.617†	9706.3	2595 ug/L	10.8
QC value within limits for P 213.617 Recovery = 103.80%			
Pb 220.353†	5631.2	532.8 ug/L	1.13
QC value within limits for Pb 220.353 Recovery = 106.57%			
Sb 206.836†	2141.0	480.6 ug/L	1.50
QC value within limits for Sb 206.836 Recovery = 96.12%			
Se 196.026†	1650.5	525.6 ug/L	2.94
QC value within limits for Se 196.026 Recovery = 105.12%			
Sn 189.927†	2465.8	248.4 ug/L	0.59
QC value within limits for Sn 189.927 Recovery = 99.34%			
Sr 421.552†	236298.9	532.0 ug/L	7.59
QC value within limits for Sr 421.552 Recovery = 106.40%			
Ti 337.279†	12697.6	481.3 ug/L	7.99
QC value within limits for Ti 337.279 Recovery = 96.27%			
Tl 190.801†	2485.9	533.0 ug/L	4.86
QC value within limits for Tl 190.801 Recovery = 106.61%			
V 292.402†	85996.8	525.3 ug/L	1.84
QC value within limits for V 292.402 Recovery = 105.06%			
Zn 206.200†	18282.0	526.0 ug/L	0.37
QC value within limits for Zn 206.200 Recovery = 105.20%			

Li 670.784 3369913.6 260.0 ug/L 1.76 260.0 ug/L 1.76 0.68%
QC value within limits for Li 670.784 Recovery = 104.01%
All analyte(s) passed QC.

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Sequence No.: 6 Autosampler Location: 1
Sample ID: ICB 151125RJS I:PB O:RJS Date Collected: 11/25/15 1:13:19 PM
Analyst: Data Type: Reprocessed on 11/30/15 9:43:27 AM
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution: Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICB 151125RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib.	Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	802882.6	99.69 %	0.695				0.70%
Y 371.029 Radial	737888.6	99.60 %	0.775				0.78%
Ag 338.289†	6.2	0.059 ug/L	0.4758	0.059 ug/L	0.4758	808.78%	
QC value within limits for Ag 338.289 Recovery = Not calculated							
Al 308.215†	7.8	12.77 ug/L	11.375	12.77 ug/L	11.375	89.11%	
QC value within limits for Al 308.215 Recovery = Not calculated							
As 188.979†	3.2	1.033 ug/L	0.4750	1.033 ug/L	0.4750	46.01%	
QC value within limits for As 188.979 Recovery = Not calculated							
B†	54.6	1.251 ug/L	0.0852	1.251 ug/L	0.0852	6.81%	
QC value within limits for B Recovery = Not calculated							
Ba 233.527†	-12.4	-0.098 ug/L	0.0775	-0.098 ug/L	0.0775	78.74%	
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	6.6	0.032 ug/L	0.0038	0.032 ug/L	0.0038	11.62%	
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 315.887†	-8.2	-2.074 ug/L	0.9861	-2.074 ug/L	0.9861	47.54%	
QC value within limits for Ca 315.887 Recovery = Not calculated							
Cd 214.440†	40.3	0.207 ug/L	0.0342	0.207 ug/L	0.0342	16.53%	
QC value within limits for Cd 214.440 Recovery = Not calculated							
Co 228.616†	19.2	0.368 ug/L	0.1364	0.368 ug/L	0.1364	37.10%	
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	15.6	0.182 ug/L	0.1489	0.182 ug/L	0.1489	81.66%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 327.393†	-16.5	-0.158 ug/L	1.3254	-0.158 ug/L	1.3254	840.55%	
QC value within limits for Cu 327.393 Recovery = Not calculated							
Fe 273.955†	25.2	1.495 ug/L	0.4017	1.495 ug/L	0.4017	26.87%	
QC value within limits for Fe 273.955 Recovery = Not calculated							
K 766.490†	-89.7	-34.17 ug/L	81.979	-34.17 ug/L	81.979	239.93%	
QC value within limits for K 766.490 Recovery = Not calculated							
Mg 285.213†	4.7	0.621 ug/L	0.5102	0.621 ug/L	0.5102	82.21%	
QC value within limits for Mg 285.213 Recovery = Not calculated							
Mn 257.610†	1.5	0.125 ug/L	0.3350	0.125 ug/L	0.3350	267.38%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	6.3	0.219 ug/L	0.0728	0.219 ug/L	0.0728	33.28%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592†	-6.8	-1.014 ug/L	9.7988	-1.014 ug/L	9.7988	966.46%	
QC value within limits for Na 589.592 Recovery = Not calculated							
Ni 231.604†	-15.1	-0.370 ug/L	0.2460	-0.370 ug/L	0.2460	66.47%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 213.617†	5.6	1.499 ug/L	1.2230	1.499 ug/L	1.2230	81.60%	
QC value within limits for P 213.617 Recovery = Not calculated							
Pb 220.353†	22.0	2.075 ug/L	0.8020	2.075 ug/L	0.8020	38.65%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
Sb 206.836†	1.4	0.311 ug/L	0.7777	0.311 ug/L	0.7777	250.00%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-4.4	-1.398 ug/L	0.6801	-1.398 ug/L	0.6801	48.64%	
QC value within limits for Se 196.026 Recovery = Not calculated							
Sn 189.927†	13.2	1.307 ug/L	0.2604	1.307 ug/L	0.2604	19.92%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	-27.4	-0.062 ug/L	0.0499	-0.062 ug/L	0.0499	80.97%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 337.279†	-2.6	-0.098 ug/L	0.3712	-0.098 ug/L	0.3712	380.63%	
QC value within limits for Ti 337.279 Recovery = Not calculated							
Tl 190.801†	6.2	1.329 ug/L	0.2811	1.329 ug/L	0.2811	21.15%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
V 292.402†	-76.6	-0.457 ug/L	0.3452	-0.457 ug/L	0.3452	75.55%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 206.200†	-3.2	-0.092 ug/L	0.1946	-0.092 ug/L	0.1946	211.38%	
QC value within limits for Zn 206.200 Recovery = Not calculated							

Li 670.784 300.9 0.023 ug/L 0.0128 0.023 ug/L 0.0128 55.34%
QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

=====
Sequence No.: 1
Sample ID: ICSA 151125RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 11/25/15 1:30:00 PM
Data Type: Reprocessed on 12/01/15 11:25:34 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSA 151125RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	762222.4	94.64 %	0.541			0.57%
Y 371.029 Radial	694044.5	93.68 %	0.550			0.59%
Ag 338.289†	-75.6	-0.715 ug/L	0.4325	-0.715 ug/L	0.4325	60.53%
QC value within limits for Ag 338.289 Recovery = Not calculated						
Al 308.215†	59903.5	98130 ug/L	4079.7	98130 ug/L	4079.7	4.16%
QC value within limits for Al 308.215 Recovery = 98.13%						
As 188.979†	12.0	3.874 ug/L	1.4253	3.874 ug/L	1.4253	36.79%
QC value greater than the upper limit for As 188.979 Recovery = Not calculated						
B†	785.2	17.98 ug/L	0.905	17.98 ug/L	0.905	5.04%
QC value within limits for B Recovery = Not calculated						
Ba 233.527†	1890.5	-3.111 ug/L	0.1090	-3.111 ug/L	0.1090	3.50%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	5.5	0.027 ug/L	0.0037	0.027 ug/L	0.0037	13.79%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 315.887†	413433.1	104800 ug/L	4310.6	104800 ug/L	4310.6	4.11%
QC value within limits for Ca 315.887 Recovery = 104.75%						
Cd 214.440†	1026.9	0.724 ug/L	0.0760	0.724 ug/L	0.0760	10.49%
QC value within limits for Cd 214.440 Recovery = Not calculated						
Co 228.616†	136.9	-1.512 ug/L	0.2246	-1.512 ug/L	0.2246	14.85%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-163.8	0.485 ug/L	0.4422	0.485 ug/L	0.4422	91.16%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 327.393†	-682.7	-1.069 ug/L	0.9838	-1.069 ug/L	0.9838	91.99%
QC value within limits for Cu 327.393 Recovery = Not calculated						
Fe 273.955†	1628779.4	94220 ug/L	120.8	94220 ug/L	120.8	0.13%
QC value within limits for Fe 273.955 Recovery = 94.22%						
K 766.490†	129.5	-23.95 ug/L	63.758	-23.95 ug/L	63.758	266.21%
QC value within limits for K 766.490 Recovery = Not calculated						
Mg 285.213†	762974.2	100000 ug/L	4406.2	100000 ug/L	4406.2	4.40%
QC value within limits for Mg 285.213 Recovery = 100.03%						
Mn 257.610†	-11.1	1.168 ug/L	0.3287	1.168 ug/L	0.3287	28.14%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-163.4	-1.385 ug/L	0.0579	-1.385 ug/L	0.0579	4.18%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592†	256.9	-401.3 ug/L	2.61	-401.3 ug/L	2.61	0.65%
QC value within limits for Na 589.592 Recovery = Not calculated						
Ni 231.604†	-122.0	0.236 ug/L	0.2344	0.236 ug/L	0.2344	99.39%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 213.617†	12.4	3.312 ug/L	0.7560	3.312 ug/L	0.7560	22.83%
QC value within limits for P 213.617 Recovery = Not calculated						
Pb 220.353†	-100.6	3.123 ug/L	0.9333	3.123 ug/L	0.9333	29.89%
QC value within limits for Pb 220.353 Recovery = Not calculated						
Sb 206.836†	-18.8	-4.216 ug/L	0.5360	-4.216 ug/L	0.5360	12.71%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-10.5	-3.354 ug/L	1.9778	-3.354 ug/L	1.9778	58.96%
QC value within limits for Se 196.026 Recovery = Not calculated						
Sn 189.927†	-27.9	1.157 ug/L	0.2587	1.157 ug/L	0.2587	22.35%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	346.0	-0.296 ug/L	0.0214	-0.296 ug/L	0.0214	7.23%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 337.279†	20.3	-1.257 ug/L	0.2137	-1.257 ug/L	0.2137	17.00%
QC value within limits for Ti 337.279 Recovery = Not calculated						
Tl 190.801†	-2.7	-0.577 ug/L	1.4079	-0.577 ug/L	1.4079	244.11%
QC value within limits for Tl 190.801 Recovery = Not calculated						
V 292.402†	3366.3	-0.537 ug/L	0.5178	-0.537 ug/L	0.5178	96.51%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 206.200†	283.7	-4.247 ug/L	0.7375	-4.247 ug/L	0.7375	17.37%
QC value within limits for Zn 206.200 Recovery = Not calculated						

Li 670.784 726.6 0.056 ug/L 0.0032 0.056 ug/L 0.0032 5.64%
QC Failed. Continue with analysis.

=====
Sequence No.: 2
Sample ID: ICSAB 151125RJS I:PB O:RJ
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 11/25/15 1:35:16 PM
Data Type: Reprocessed on 12/01/15 11:25:36 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICSAB 151125RJS I:PB O:RJ

Analyte	Mean Corrected Intensity	Calib.	Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	756166.5	93.89 %	0.332				0.35%
Y 371.029 Radial	688099.5	92.88 %	0.395				0.43%
Ag 338.289†	52524.8	496.8 ug/L	0.76	496.8 ug/L	0.76	0.15%	
QC value within limits for Ag 338.289 Recovery = 99.36%							
Al 308.215†	61877.5	101400 ug/L	1731.1	101400 ug/L	1731.1	1.71%	
QC value within limits for Al 308.215 Recovery = 101.37%							
As 188.979†	807.8	261.3 ug/L	1.58	261.3 ug/L	1.58	0.60%	
QC value within limits for As 188.979 Recovery = 104.51%							
B†	531.6	12.17 ug/L	0.574	12.17 ug/L	0.574	4.71%	
QC value within limits for B Recovery = Not calculated							
Ba 233.527†	34832.1	256.2 ug/L	0.61	256.2 ug/L	0.61	0.24%	
QC value within limits for Ba 233.527 Recovery = 102.47%							
Be 313.107†	57447.7	279.5 ug/L	6.40	279.5 ug/L	6.40	2.29%	
QC value within limits for Be 313.107 Recovery = 111.79%							
Ca 315.887†	415670.6	105300 ug/L	2586.8	105300 ug/L	2586.8	2.46%	
QC value within limits for Ca 315.887 Recovery = 105.32%							
Cd 214.440†	101243.1	514.2 ug/L	3.58	514.2 ug/L	3.58	0.70%	
QC value within limits for Cd 214.440 Recovery = 102.85%							
Co 228.616†	14046.4	264.2 ug/L	0.85	264.2 ug/L	0.85	0.32%	
QC value within limits for Co 228.616 Recovery = 105.69%							
Cr 267.716†	22983.3	271.5 ug/L	1.02	271.5 ug/L	1.02	0.37%	
QC value within limits for Cr 267.716 Recovery = 108.58%							
Cu 327.393†	27765.3	267.8 ug/L	1.39	267.8 ug/L	1.39	0.52%	
QC value within limits for Cu 327.393 Recovery = 107.12%							
Fe 273.955†	1580794.4	91420 ug/L	465.2	91420 ug/L	465.2	0.51%	
QC value within limits for Fe 273.955 Recovery = 91.42%							
K 766.490†	264.8	26.80 ug/L	58.413	26.80 ug/L	58.413	217.97%	
QC value within limits for K 766.490 Recovery = Not calculated							
Mg 285.213†	766743.1	100500 ug/L	2465.4	100500 ug/L	2465.4	2.45%	
QC value within limits for Mg 285.213 Recovery = 100.52%							
Mn 257.610†	3225.3	268.8 ug/L	6.00	268.8 ug/L	6.00	2.23%	
QC value within limits for Mn 257.610 Recovery = 107.53%							
Mo 202.031†	6682.4	237.1 ug/L	1.32	237.1 ug/L	1.32	0.56%	
QC value within limits for Mo 202.031 Recovery = 94.85%							
Na 589.592†	-0.5	-423.9 ug/L	13.11	-423.9 ug/L	13.11	3.09%	
QC value within limits for Na 589.592 Recovery = Not calculated							
Ni 231.604†	21532.1	527.6 ug/L	1.96	527.6 ug/L	1.96	0.37%	
QC value within limits for Ni 231.604 Recovery = 105.52%							
P 213.617†	-41.3	-11.04 ug/L	2.171	-11.04 ug/L	2.171	19.67%	
QC value within limits for P 213.617 Recovery = Not calculated							
Pb 220.353†	5410.0	523.5 ug/L	2.19	523.5 ug/L	2.19	0.42%	
QC value within limits for Pb 220.353 Recovery = 104.70%							
Sb 206.836†	1054.0	236.6 ug/L	2.44	236.6 ug/L	2.44	1.03%	
QC value within limits for Sb 206.836 Recovery = 94.64%							
Se 196.026†	790.1	251.6 ug/L	1.83	251.6 ug/L	1.83	0.73%	
QC value within limits for Se 196.026 Recovery = 100.64%							
Sn 189.927†	-19.5	1.966 ug/L	0.4627	1.966 ug/L	0.4627	23.54%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	262.2	-0.488 ug/L	0.1185	-0.488 ug/L	0.1185	24.28%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 337.279†	-17.1	-2.678 ug/L	2.2770	-2.678 ug/L	2.2770	85.04%	
QC value within limits for Ti 337.279 Recovery = Not calculated							
Tl 190.801†	1182.5	253.5 ug/L	3.61	253.5 ug/L	3.61	1.42%	
QC value within limits for Tl 190.801 Recovery = 101.42%							
V 292.402†	46418.9	264.7 ug/L	1.56	264.7 ug/L	1.56	0.59%	
QC value within limits for V 292.402 Recovery = 105.86%							
Zn 206.200†	18140.2	510.3 ug/L	1.48	510.3 ug/L	1.48	0.29%	
QC value within limits for Zn 206.200 Recovery = 102.06%							

Li 670.784 683.5 0.053 ug/L 0.0137 0.053 ug/L 0.0137 25.95%
All analyte(s) passed QC.

Sequence No.: 2
 Sample ID: CCV1 151125RJS I:PB O:RJS
 Analyst:
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt:
 Dilution:

Autosampler Location: 3
 Date Collected: 11/25/15 2:09:54 PM
 Data Type: Reprocessed on 11/30/15 9:44:28 AM
 Initial Sample Vol:
 Sample Prep Vol:

Mean Data: CCV1 151125RJS I:PB O:RJS

Analyte	Mean Corrected		Calib.	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc. Units			Conc. Units	Std.Dev.		
Y 371.029	784546.2	97.41 %	1.198					1.23%
Y 371.029 Radial	718827.6	97.03 %	1.237					1.27%
Ag 338.289†	26525.2	250.9 ug/L	2.34		250.9 ug/L	2.34		0.93%
QC value within limits for Ag 338.289 Recovery = 100.35%								
Al 308.215†	6350.9	10410 ug/L	80.7		10410 ug/L	80.7		0.78%
QC value within limits for Al 308.215 Recovery = 104.10%								
As 188.979†	1555.4	503.1 ug/L	5.08		503.1 ug/L	5.08		1.01%
QC value within limits for As 188.979 Recovery = 100.62%								
B†	22704.9	519.8 ug/L	4.14		519.8 ug/L	4.14		0.80%
QC value within limits for B Recovery = 103.95%								
Ba 233.527†	65201.0	510.2 ug/L	2.40		510.2 ug/L	2.40		0.47%
QC value within limits for Ba 233.527 Recovery = 102.03%								
Be 313.107†	106845.8	519.8 ug/L	10.40		519.8 ug/L	10.40		2.00%
QC value within limits for Be 313.107 Recovery = 103.96%								
Ca 315.887†	103846.1	26310 ug/L	391.9		26310 ug/L	391.9		1.49%
QC value within limits for Ca 315.887 Recovery = 105.24%								
Cd 214.440†	100736.5	515.7 ug/L	0.22		515.7 ug/L	0.22		0.04%
QC value within limits for Cd 214.440 Recovery = 103.14%								
Co 228.616†	27746.8	528.7 ug/L	5.70		528.7 ug/L	5.70		1.08%
QC value within limits for Co 228.616 Recovery = 105.74%								
Cr 267.716†	43720.4	512.2 ug/L	3.52		512.2 ug/L	3.52		0.69%
QC value within limits for Cr 267.716 Recovery = 102.43%								
Cu 327.393†	53503.1	508.3 ug/L	3.89		508.3 ug/L	3.89		0.77%
QC value within limits for Cu 327.393 Recovery = 101.66%								
Fe 273.955†	178138.8	10260 ug/L	33.6		10260 ug/L	33.6		0.33%
QC value within limits for Fe 273.955 Recovery = 102.60%								
K 766.490†	26955.0	10250 ug/L	160.7		10250 ug/L	160.7		1.57%
QC value within limits for K 766.490 Recovery = 102.52%								
Mg 285.213†	202556.3	26540 ug/L	412.9		26540 ug/L	412.9		1.56%
QC value within limits for Mg 285.213 Recovery = 106.14%								
Mn 257.610†	6336.8	524.0 ug/L	4.34		524.0 ug/L	4.34		0.83%
QC value within limits for Mn 257.610 Recovery = 104.81%								
Mo 202.031†	14435.1	503.6 ug/L	3.05		503.6 ug/L	3.05		0.61%
QC value within limits for Mo 202.031 Recovery = 100.72%								
Na 589.592†	87740.0	13060 ug/L	213.4		13060 ug/L	213.4		1.63%
QC value within limits for Na 589.592 Recovery = 104.48%								
Ni 231.604†	21387.9	519.4 ug/L	5.32		519.4 ug/L	5.32		1.02%
QC value within limits for Ni 231.604 Recovery = 103.89%								
P 213.617†	9321.6	2492 ug/L	30.8		2492 ug/L	30.8		1.24%
QC value within limits for P 213.617 Recovery = 99.69%								
Pb 220.353†	5367.8	507.5 ug/L	5.04		507.5 ug/L	5.04		0.99%
QC value within limits for Pb 220.353 Recovery = 101.50%								
Sb 206.836†	2233.7	501.4 ug/L	3.96		501.4 ug/L	3.96		0.79%
QC value within limits for Sb 206.836 Recovery = 100.29%								
Se 196.026†	1578.8	502.8 ug/L	6.93		502.8 ug/L	6.93		1.38%
QC value within limits for Se 196.026 Recovery = 100.55%								
Sn 189.927†	5023.6	503.0 ug/L	4.38		503.0 ug/L	4.38		0.87%
QC value within limits for Sn 189.927 Recovery = 100.60%								
Sr 421.552†	233154.6	524.8 ug/L	8.52		524.8 ug/L	8.52		1.62%
QC value within limits for Sr 421.552 Recovery = 104.96%								
Ti 337.279†	13751.1	521.1 ug/L	7.02		521.1 ug/L	7.02		1.35%
QC value within limits for Ti 337.279 Recovery = 104.22%								
Tl 190.801†	2334.3	500.5 ug/L	3.52		500.5 ug/L	3.52		0.70%
QC value within limits for Tl 190.801 Recovery = 100.11%								
V 292.402†	84485.8	517.0 ug/L	1.17		517.0 ug/L	1.17		0.23%
QC value within limits for V 292.402 Recovery = 103.39%								
Zn 206.200†	17750.0	510.5 ug/L	3.97		510.5 ug/L	3.97		0.78%
QC value within limits for Zn 206.200 Recovery = 102.11%								

Li 670.784 3228660.5 249.1 ug/L 0.55 249.1 ug/L 0.55 0.22%
QC value within limits for Li 670.784 Recovery = 99.65%
All analyte(s) passed QC.

=====
Sequence No.: 3
Sample ID: CCB 151125RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

=====
Autosampler Location: 1
Date Collected: 11/25/15 2:13:21 PM
Data Type: Reprocessed on 11/30/15 9:44:30 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 151125RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib.	Sample	Std.Dev.	RSD
	Conc. Units	Std.Dev.	Conc. Units	Std.Dev.	
Y 371.029	810688.2	100.7 %	1.23		1.23%
Y 371.029 Radial	745470.7	100.6 %	1.37		1.36%
Ag 338.289†	-22.0	-0.208 ug/L	0.4173	-0.208 ug/L	0.4173 200.29%
QC value within limits for Ag 338.289 Recovery = Not calculated					
Al 308.215†	7.0	11.38 ug/L	9.100	11.38 ug/L	9.100 79.98%
QC value within limits for Al 308.215 Recovery = Not calculated					
As 188.979†	1.0	0.309 ug/L	0.9480	0.309 ug/L	0.9480 307.23%
QC value within limits for As 188.979 Recovery = Not calculated					
B†	163.1	3.733 ug/L	0.3440	3.733 ug/L	0.3440 9.21%
QC value within limits for B Recovery = Not calculated					
Ba 233.527†	-14.2	-0.113 ug/L	0.0174	-0.113 ug/L	0.0174 15.38%
QC value within limits for Ba 233.527 Recovery = Not calculated					
Be 313.107†	12.5	0.061 ug/L	0.0274	0.061 ug/L	0.0274 44.97%
QC value within limits for Be 313.107 Recovery = Not calculated					
Ca 315.887†	26.5	6.717 ug/L	3.9114	6.717 ug/L	3.9114 58.23%
QC value within limits for Ca 315.887 Recovery = Not calculated					
Cd 214.440†	50.2	0.257 ug/L	0.1215	0.257 ug/L	0.1215 47.21%
QC value within limits for Cd 214.440 Recovery = Not calculated					
Co 228.616†	4.9	0.098 ug/L	0.2486	0.098 ug/L	0.2486 254.10%
QC value within limits for Co 228.616 Recovery = Not calculated					
Cr 267.716†	23.4	0.274 ug/L	0.1068	0.274 ug/L	0.1068 38.92%
QC value within limits for Cr 267.716 Recovery = Not calculated					
Cu 327.393†	-132.2	-1.257 ug/L	0.5679	-1.257 ug/L	0.5679 45.17%
QC value within limits for Cu 327.393 Recovery = Not calculated					
Fe 273.955†	35.7	2.104 ug/L	1.7425	2.104 ug/L	1.7425 82.83%
QC value within limits for Fe 273.955 Recovery = Not calculated					
K 766.490†	134.8	51.35 ug/L	54.136	51.35 ug/L	54.136 105.43%
QC value within limits for K 766.490 Recovery = Not calculated					
Mg 285.213†	10.2	1.330 ug/L	1.1679	1.330 ug/L	1.1679 87.78%
QC value within limits for Mg 285.213 Recovery = Not calculated					
Mn 257.610†	1.1	0.090 ug/L	0.0313	0.090 ug/L	0.0313 34.77%
QC value within limits for Mn 257.610 Recovery = Not calculated					
Mo 202.031†	29.4	1.026 ug/L	0.3166	1.026 ug/L	0.3166 30.86%
QC value within limits for Mo 202.031 Recovery = Not calculated					
Na 589.592†	24.2	3.582 ug/L	18.5121	3.582 ug/L	18.5121 516.78%
QC value within limits for Na 589.592 Recovery = Not calculated					
Ni 231.604†	6.5	0.154 ug/L	0.2880	0.154 ug/L	0.2880 187.02%
QC value within limits for Ni 231.604 Recovery = Not calculated					
P 213.617†	-3.9	-1.035 ug/L	0.8633	-1.035 ug/L	0.8633 83.42%
QC value within limits for P 213.617 Recovery = Not calculated					
Pb 220.353†	18.5	1.751 ug/L	1.5995	1.751 ug/L	1.5995 91.36%
QC value within limits for Pb 220.353 Recovery = Not calculated					
Sb 206.836†	-0.5	-0.117 ug/L	0.3296	-0.117 ug/L	0.3296 281.43%
QC value within limits for Sb 206.836 Recovery = Not calculated					
Se 196.026†	-1.1	-0.335 ug/L	0.3163	-0.335 ug/L	0.3163 94.29%
QC value within limits for Se 196.026 Recovery = Not calculated					
Sn 189.927†	21.1	2.089 ug/L	0.7589	2.089 ug/L	0.7589 36.33%
QC value within limits for Sn 189.927 Recovery = Not calculated					
Sr 421.552†	30.4	0.068 ug/L	0.0981	0.068 ug/L	0.0981 143.54%
QC value within limits for Sr 421.552 Recovery = Not calculated					
Ti 337.279†	-11.8	-0.448 ug/L	0.0472	-0.448 ug/L	0.0472 10.53%
QC value within limits for Ti 337.279 Recovery = Not calculated					
Tl 190.801†	12.1	2.597 ug/L	0.0818	2.597 ug/L	0.0818 3.15%
QC value within limits for Tl 190.801 Recovery = Not calculated					
V 292.402†	-80.4	-0.469 ug/L	0.3220	-0.469 ug/L	0.3220 68.71%
QC value within limits for V 292.402 Recovery = Not calculated					
Zn 206.200†	17.8	0.514 ug/L	0.2220	0.514 ug/L	0.2220 43.23%
QC value within limits for Zn 206.200 Recovery = Not calculated					

Li 670.784 264.5 0.020 ug/L 0.0176 0.020 ug/L 0.0176 86.48%
QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

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Sequence No.: 11
Sample ID: CCV2 151125RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 11/25/15 2:51:41 PM
Data Type: Reprocessed on 11/30/15 9:44:40 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV2 151125RJS I:PB O:RJS

Analyte	Mean Corrected		Calib.	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc. Units			Conc. Units	Std.Dev.		
Y 371.029	798479.5	99.14 %	0.816					0.82%
Y 371.029 Radial	731313.9	98.72 %	0.854					0.87%
Ag 338.289†	20124.3	190.3 ug/L	1.84		190.3 ug/L	1.84		0.97%
QC value within limits for Ag 338.289		Recovery = 101.52%						
Al 308.215†	4798.3	7865 ug/L	38.6		7865 ug/L	38.6		0.49%
QC value within limits for Al 308.215		Recovery = 104.86%						
As 188.979†	1164.0	376.5 ug/L	2.38		376.5 ug/L	2.38		0.63%
QC value within limits for As 188.979		Recovery = 100.40%						
B†	16708.4	382.5 ug/L	4.71		382.5 ug/L	4.71		1.23%
QC value within limits for B		Recovery = 102.00%						
Ba 233.527†	49027.1	383.6 ug/L	5.97		383.6 ug/L	5.97		1.56%
QC value within limits for Ba 233.527		Recovery = 102.30%						
Be 313.107†	80921.1	393.7 ug/L	2.40		393.7 ug/L	2.40		0.61%
QC value within limits for Be 313.107		Recovery = 104.98%						
Ca 315.887†	77919.0	19740 ug/L	174.4		19740 ug/L	174.4		0.88%
QC value within limits for Ca 315.887		Recovery = 105.29%						
Cd 214.440†	75614.8	387.1 ug/L	4.62		387.1 ug/L	4.62		1.19%
QC value within limits for Cd 214.440		Recovery = 103.23%						
Co 228.616†	20300.5	386.8 ug/L	5.51		386.8 ug/L	5.51		1.42%
QC value within limits for Co 228.616		Recovery = 103.14%						
Cr 267.716†	32735.9	383.5 ug/L	4.92		383.5 ug/L	4.92		1.28%
QC value within limits for Cr 267.716		Recovery = 102.26%						
Cu 327.393†	40129.8	381.2 ug/L	5.86		381.2 ug/L	5.86		1.54%
QC value within limits for Cu 327.393		Recovery = 101.67%						
Fe 273.955†	134035.1	7720 ug/L	107.6		7720 ug/L	107.6		1.39%
QC value within limits for Fe 273.955		Recovery = 102.93%						
K 766.490†	20379.6	7751 ug/L	78.5		7751 ug/L	78.5		1.01%
QC value within limits for K 766.490		Recovery = 103.35%						
Mg 285.213†	152457.5	19970 ug/L	148.5		19970 ug/L	148.5		0.74%
QC value within limits for Mg 285.213		Recovery = 106.52%						
Mn 257.610†	4789.4	396.1 ug/L	2.12		396.1 ug/L	2.12		0.53%
QC value within limits for Mn 257.610		Recovery = 105.62%						
Mo 202.031†	10974.1	382.9 ug/L	2.83		382.9 ug/L	2.83		0.74%
QC value within limits for Mo 202.031		Recovery = 102.10%						
Na 589.592†	66040.7	9830 ug/L	62.5		9830 ug/L	62.5		0.64%
QC value within limits for Na 589.592		Recovery = 104.85%						
Ni 231.604†	15812.2	384.0 ug/L	5.87		384.0 ug/L	5.87		1.53%
QC value within limits for Ni 231.604		Recovery = 102.39%						
P 213.617†	7036.5	1881 ug/L	15.7		1881 ug/L	15.7		0.83%
QC value within limits for P 213.617		Recovery = 100.33%						
Pb 220.353†	4094.0	387.1 ug/L	2.28		387.1 ug/L	2.28		0.59%
QC value within limits for Pb 220.353		Recovery = 103.22%						
Sb 206.836†	1683.4	377.9 ug/L	2.99		377.9 ug/L	2.99		0.79%
QC value within limits for Sb 206.836		Recovery = 100.77%						
Se 196.026†	1186.8	377.9 ug/L	4.44		377.9 ug/L	4.44		1.18%
QC value within limits for Se 196.026		Recovery = 100.78%						
Sn 189.927†	3858.4	386.3 ug/L	1.94		386.3 ug/L	1.94		0.50%
QC value within limits for Sn 189.927		Recovery = 103.00%						
Sr 421.552†	175398.7	394.8 ug/L	2.71		394.8 ug/L	2.71		0.69%
QC value within limits for Sr 421.552		Recovery = 105.28%						
Ti 337.279†	10362.5	392.7 ug/L	0.61		392.7 ug/L	0.61		0.16%
QC value within limits for Ti 337.279		Recovery = 104.72%						
Tl 190.801†	1787.9	383.4 ug/L	1.90		383.4 ug/L	1.90		0.50%
QC value within limits for Tl 190.801		Recovery = 102.23%						
V 292.402†	63342.5	387.6 ug/L	5.33		387.6 ug/L	5.33		1.37%
QC value within limits for V 292.402		Recovery = 103.37%						
Zn 206.200†	13466.5	387.3 ug/L	2.36		387.3 ug/L	2.36		0.61%
QC value within limits for Zn 206.200		Recovery = 103.28%						

Li 670.784 2445741.0 188.7 ug/L 0.62 188.7 ug/L 0.62 0.33%
QC value within limits for Li 670.784 Recovery = 100.65%
All analyte(s) passed QC.

=====
Sequence No.: 12
Sample ID: CCB 151125RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/25/15 2:55:06 PM
Data Type: Reprocessed on 11/30/15 9:44:42 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 151125RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	813345.7	101.0 %	0.44			0.44%
Y 371.029 Radial	748217.7	101.0 %	0.50			0.50%
Ag 338.289†	-54.1	-0.512 ug/L	0.1596	-0.512 ug/L	0.1596	31.20%
QC value within limits for Ag 338.289		Recovery = Not calculated				
Al 308.215†	9.9	16.11 ug/L	9.723	16.11 ug/L	9.723	60.36%
QC value within limits for Al 308.215		Recovery = Not calculated				
As 188.979†	3.2	1.046 ug/L	0.7618	1.046 ug/L	0.7618	72.85%
QC value within limits for As 188.979		Recovery = Not calculated				
B†	199.6	4.568 ug/L	0.7749	4.568 ug/L	0.7749	16.96%
QC value within limits for B		Recovery = Not calculated				
Ba 233.527†	-9.1	-0.073 ug/L	0.0290	-0.073 ug/L	0.0290	39.74%
QC value within limits for Ba 233.527		Recovery = Not calculated				
Be 313.107†	22.5	0.109 ug/L	0.0182	0.109 ug/L	0.0182	16.66%
QC value within limits for Be 313.107		Recovery = Not calculated				
Ca 315.887†	52.2	13.23 ug/L	3.049	13.23 ug/L	3.049	23.05%
QC value within limits for Ca 315.887		Recovery = Not calculated				
Cd 214.440†	46.6	0.239 ug/L	0.0148	0.239 ug/L	0.0148	6.19%
QC value within limits for Cd 214.440		Recovery = Not calculated				
Co 228.616†	18.5	0.358 ug/L	0.2764	0.358 ug/L	0.2764	77.25%
QC value within limits for Co 228.616		Recovery = Not calculated				
Cr 267.716†	10.8	0.126 ug/L	0.1341	0.126 ug/L	0.1341	106.38%
QC value within limits for Cr 267.716		Recovery = Not calculated				
Cu 327.393†	-56.2	-0.535 ug/L	0.9115	-0.535 ug/L	0.9115	170.49%
QC value within limits for Cu 327.393		Recovery = Not calculated				
Fe 273.955†	57.2	3.337 ug/L	0.1328	3.337 ug/L	0.1328	3.98%
QC value within limits for Fe 273.955		Recovery = Not calculated				
K 766.490†	39.8	15.16 ug/L	43.281	15.16 ug/L	43.281	285.43%
QC value within limits for K 766.490		Recovery = Not calculated				
Mg 285.213†	35.9	4.713 ug/L	1.4748	4.713 ug/L	1.4748	31.29%
QC value within limits for Mg 285.213		Recovery = Not calculated				
Mn 257.610†	5.9	0.485 ug/L	0.4339	0.485 ug/L	0.4339	89.42%
QC value within limits for Mn 257.610		Recovery = Not calculated				
Mo 202.031†	36.8	1.285 ug/L	0.2750	1.285 ug/L	0.2750	21.40%
QC value within limits for Mo 202.031		Recovery = Not calculated				
Na 589.592†	-165.9	-24.80 ug/L	12.766	-24.80 ug/L	12.766	51.48%
QC value within limits for Na 589.592		Recovery = Not calculated				
Ni 231.604†	-3.5	-0.091 ug/L	0.0456	-0.091 ug/L	0.0456	50.10%
QC value within limits for Ni 231.604		Recovery = Not calculated				
P 213.617†	5.1	1.362 ug/L	0.7456	1.362 ug/L	0.7456	54.74%
QC value within limits for P 213.617		Recovery = Not calculated				
Pb 220.353†	14.3	1.351 ug/L	1.3111	1.351 ug/L	1.3111	97.07%
QC value within limits for Pb 220.353		Recovery = Not calculated				
Sb 206.836†	2.8	0.638 ug/L	1.3281	0.638 ug/L	1.3281	208.02%
QC value within limits for Sb 206.836		Recovery = Not calculated				
Se 196.026†	-1.9	-0.618 ug/L	0.8118	-0.618 ug/L	0.8118	131.29%
QC value within limits for Se 196.026		Recovery = Not calculated				
Sn 189.927†	20.9	2.069 ug/L	0.5795	2.069 ug/L	0.5795	28.00%
QC value within limits for Sn 189.927		Recovery = Not calculated				
Sr 421.552†	54.5	0.123 ug/L	0.0782	0.123 ug/L	0.0782	63.73%
QC value within limits for Sr 421.552		Recovery = Not calculated				
Ti 337.279†	-4.8	-0.183 ug/L	0.1795	-0.183 ug/L	0.1795	98.17%
QC value within limits for Ti 337.279		Recovery = Not calculated				
Tl 190.801†	10.9	2.342 ug/L	0.4443	2.342 ug/L	0.4443	18.97%
QC value within limits for Tl 190.801		Recovery = Not calculated				
V 292.402†	-47.1	-0.266 ug/L	0.3868	-0.266 ug/L	0.3868	145.56%
QC value within limits for V 292.402		Recovery = Not calculated				
Zn 206.200†	26.0	0.744 ug/L	0.3844	0.744 ug/L	0.3844	51.65%
QC value within limits for Zn 206.200		Recovery = Not calculated				

Li 670.784 577.6 0.045 ug/L 0.0091 0.045 ug/L 0.0091 20.35%
QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 14
Sample ID: CCV1 151125RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemi
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 11/25/15 3:03:54 PM
Data Type: Reprocessed on 11/30/15 9:44:44 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCV1 151125RJS I:PB O:RJS

Analyte	Mean		Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity		Conc.	Units	Std.Dev.		Conc.	Units		
Y 371.029	779628.2		96.80	%	.945					0.98%
Y 371.029 Radial	709967.2		95.83	%	1.040					1.09%
Ag 338.289†	26820.0		253.7	ug/L	4.73		253.7	ug/L	4.73	1.86%
QC value within limits for Ag 338.289			Recovery =	101.47%						
Al 308.215†	6475.9		10620	ug/L	126.4		10620	ug/L	126.4	1.19%
QC value within limits for Al 308.215			Recovery =	106.15%						
As 188.979†	1580.0		511.1	ug/L	7.46		511.1	ug/L	7.46	1.46%
QC value within limits for As 188.979			Recovery =	102.21%						
B†	22091.3		505.7	ug/L	3.70		505.7	ug/L	3.70	0.73%
QC value within limits for B			Recovery =	101.15%						
Ba 233.527†	65755.5		514.5	ug/L	6.83		514.5	ug/L	6.83	1.33%
QC value within limits for Ba 233.527			Recovery =	102.90%						
Be 313.107†	107794.2		524.4	ug/L	10.69		524.4	ug/L	10.69	2.04%
QC value within limits for Be 313.107			Recovery =	104.88%						
Ca 315.887†	104430.9		26460	ug/L	533.2		26460	ug/L	533.2	2.02%
QC value within limits for Ca 315.887			Recovery =	105.84%						
Cd 214.440†	101512.8		519.7	ug/L	5.84		519.7	ug/L	5.84	1.12%
QC value within limits for Cd 214.440			Recovery =	103.93%						
Co 228.616†	27116.6		516.6	ug/L	6.69		516.6	ug/L	6.69	1.29%
QC value within limits for Co 228.616			Recovery =	103.32%						
Cr 267.716†	43949.5		514.8	ug/L	7.06		514.8	ug/L	7.06	1.37%
QC value within limits for Cr 267.716			Recovery =	102.97%						
Cu 327.393†	53721.7		510.4	ug/L	10.07		510.4	ug/L	10.07	1.97%
QC value within limits for Cu 327.393			Recovery =	102.07%						
Fe 273.955†	178944.6		10310	ug/L	122.3		10310	ug/L	122.3	1.19%
QC value within limits for Fe 273.955			Recovery =	103.06%						
K 766.490†	27508.8		10460	ug/L	94.6		10460	ug/L	94.6	0.90%
QC value within limits for K 766.490			Recovery =	104.63%						
Mg 285.213†	203796.3		26700	ug/L	474.7		26700	ug/L	474.7	1.78%
QC value within limits for Mg 285.213			Recovery =	106.79%						
Mn 257.610†	6408.5		530.0	ug/L	3.36		530.0	ug/L	3.36	0.63%
QC value within limits for Mn 257.610			Recovery =	106.00%						
Mo 202.031†	14126.7		492.8	ug/L	6.06		492.8	ug/L	6.06	1.23%
QC value within limits for Mo 202.031			Recovery =	98.57%						
Na 589.592†	87950.6		13090	ug/L	228.8		13090	ug/L	228.8	1.75%
QC value within limits for Na 589.592			Recovery =	104.73%						
Ni 231.604†	21099.9		512.4	ug/L	6.84		512.4	ug/L	6.84	1.33%
QC value within limits for Ni 231.604			Recovery =	102.48%						
P 213.617†	9530.6		2548	ug/L	35.1		2548	ug/L	35.1	1.38%
QC value within limits for P 213.617			Recovery =	101.92%						
Pb 220.353†	5472.9		517.4	ug/L	7.05		517.4	ug/L	7.05	1.36%
QC value within limits for Pb 220.353			Recovery =	103.48%						
Sb 206.836†	2295.2		515.2	ug/L	5.33		515.2	ug/L	5.33	1.03%
QC value within limits for Sb 206.836			Recovery =	103.05%						
Se 196.026†	1615.6		514.5	ug/L	2.92		514.5	ug/L	2.92	0.57%
QC value within limits for Se 196.026			Recovery =	102.90%						
Sn 189.927†	5195.9		520.1	ug/L	6.15		520.1	ug/L	6.15	1.18%
QC value within limits for Sn 189.927			Recovery =	104.03%						
Sr 421.552†	234513.4		527.9	ug/L	10.08		527.9	ug/L	10.08	1.91%
QC value within limits for Sr 421.552			Recovery =	105.58%						
Ti 337.279†	13924.6		527.7	ug/L	3.25		527.7	ug/L	3.25	0.62%
QC value within limits for Ti 337.279			Recovery =	105.54%						
Tl 190.801†	2409.4		516.6	ug/L	4.13		516.6	ug/L	4.13	0.80%
QC value within limits for Tl 190.801			Recovery =	103.33%						
V 292.402†	85183.1		521.0	ug/L	6.74		521.0	ug/L	6.74	1.29%
QC value within limits for V 292.402			Recovery =	104.20%						
Zn 206.200†	17370.8		499.6	ug/L	4.39		499.6	ug/L	4.39	0.88%
QC value within limits for Zn 206.200			Recovery =	99.93%						

Li 670.784 3253598.8 251.1 ug/L 1.97 251.1 ug/L 1.97 0.79%
QC value within limits for Li 670.784 Recovery = 100.42%
All analyte(s) passed QC.

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Sequence No.: 15
Sample ID: CCB 151125RJS I:PB O:RJS
Analyst:
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 11/25/15 3:07:20 PM
Data Type: Reprocessed on 11/30/15 9:44:46 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: CCB 151125RJS I:PB O:RJS

Analyte	Mean Corrected Intensity	Calib.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	813318.7	101.0 %	0.57		0.56%
Y 371.029 Radial	748512.1	101.0 %	0.65		0.64%
Ag 338.289†	-20.3	-0.192 ug/L	0.5956	-0.192 ug/L	0.5956 310.56%
QC value within limits for Ag 338.289 Recovery = Not calculated					
Al 308.215†	3.5	5.680 ug/L	9.3612	5.680 ug/L	9.3612 164.81%
QC value within limits for Al 308.215 Recovery = Not calculated					
As 188.979†	2.1	0.665 ug/L	1.1493	0.665 ug/L	1.1493 172.74%
QC value within limits for As 188.979 Recovery = Not calculated					
B†	238.6	5.462 ug/L	0.5913	5.462 ug/L	0.5913 10.82%
QC value within limits for B Recovery = Not calculated					
Ba 233.527†	0.3	0.001 ug/L	0.0642	0.001 ug/L	0.0642 >999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated					
Be 313.107†	24.1	0.117 ug/L	0.0235	0.117 ug/L	0.0235 20.02%
QC value within limits for Be 313.107 Recovery = Not calculated					
Ca 315.887†	39.1	9.916 ug/L	1.2229	9.916 ug/L	1.2229 12.33%
QC value within limits for Ca 315.887 Recovery = Not calculated					
Cd 214.440†	47.2	0.242 ug/L	0.0580	0.242 ug/L	0.0580 23.92%
QC value within limits for Cd 214.440 Recovery = Not calculated					
Co 228.616†	23.6	0.453 ug/L	0.2476	0.453 ug/L	0.2476 54.68%
QC value within limits for Co 228.616 Recovery = Not calculated					
Cr 267.716†	29.8	0.347 ug/L	0.1599	0.347 ug/L	0.1599 46.09%
QC value within limits for Cr 267.716 Recovery = Not calculated					
Cu 327.393†	147.7	1.402 ug/L	0.7891	1.402 ug/L	0.7891 56.27%
QC value within limits for Cu 327.393 Recovery = Not calculated					
Fe 273.955†	66.0	3.800 ug/L	0.1980	3.800 ug/L	0.1980 5.21%
QC value within limits for Fe 273.955 Recovery = Not calculated					
K 766.490†	116.6	44.42 ug/L	74.026	44.42 ug/L	74.026 166.65%
QC value within limits for K 766.490 Recovery = Not calculated					
Mg 285.213†	34.1	4.469 ug/L	1.5930	4.469 ug/L	1.5930 35.65%
QC value within limits for Mg 285.213 Recovery = Not calculated					
Mn 257.610†	8.1	0.674 ug/L	0.3447	0.674 ug/L	0.3447 51.17%
QC value within limits for Mn 257.610 Recovery = Not calculated					
Mo 202.031†	27.6	0.961 ug/L	0.1111	0.961 ug/L	0.1111 11.56%
QC value within limits for Mo 202.031 Recovery = Not calculated					
Na 589.592†	-50.1	-7.512 ug/L	7.7299	-7.512 ug/L	7.7299 102.90%
QC value within limits for Na 589.592 Recovery = Not calculated					
Ni 231.604†	6.3	0.150 ug/L	0.1928	0.150 ug/L	0.1928 128.77%
QC value within limits for Ni 231.604 Recovery = Not calculated					
P 213.617†	4.9	1.318 ug/L	0.9122	1.318 ug/L	0.9122 69.19%
QC value within limits for P 213.617 Recovery = Not calculated					
Pb 220.353†	6.5	0.611 ug/L	0.4496	0.611 ug/L	0.4496 73.54%
QC value within limits for Pb 220.353 Recovery = Not calculated					
Sb 206.836†	4.3	0.966 ug/L	0.7671	0.966 ug/L	0.7671 79.40%
QC value within limits for Sb 206.836 Recovery = Not calculated					
Se 196.026†	3.3	1.048 ug/L	1.1784	1.048 ug/L	1.1784 112.45%
QC value within limits for Se 196.026 Recovery = Not calculated					
Sn 189.927†	15.1	1.502 ug/L	0.4631	1.502 ug/L	0.4631 30.82%
QC value within limits for Sn 189.927 Recovery = Not calculated					
Sr 421.552†	109.1	0.246 ug/L	0.1642	0.246 ug/L	0.1642 66.86%
QC value within limits for Sr 421.552 Recovery = Not calculated					
Ti 337.279†	-1.5	-0.058 ug/L	0.4533	-0.058 ug/L	0.4533 776.08%
QC value within limits for Ti 337.279 Recovery = Not calculated					
Tl 190.801†	9.6	2.066 ug/L	0.6137	2.066 ug/L	0.6137 29.71%
QC value within limits for Tl 190.801 Recovery = Not calculated					
V 292.402†	35.1	0.227 ug/L	0.1610	0.227 ug/L	0.1610 71.04%
QC value within limits for V 292.402 Recovery = Not calculated					
Zn 206.200†	23.4	0.672 ug/L	0.3161	0.672 ug/L	0.3161 47.03%
QC value within limits for Zn 206.200 Recovery = Not calculated					

Li 670.784 687.7 0.053 ug/L 0.0152 0.053 ug/L 0.0152 28.61%
QC value within limits for Li 670.784 Recovery = Not calculated
All analyte(s) passed QC.

METALS

Raw Data

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	ALUMINUM (AL)	4.00 U	50.0	4.00	1.98	mg/Kg	11/23/15	11/24/15	#61CJU-151123A-AZ24401
6010C	BORON (B)	4.00 U	5.0	4.00	1.55	mg/Kg	11/23/15	11/24/15	#61CJU-151123A-AZ24401
6010C	LITHIUM (LI)	0.500 U	0.67	0.500	0.250	mg/Kg	11/23/15	11/24/15	#61CJU-151123A-AZ24401
6010C	ZINC (ZN)	4.00 U	8.0	4.00	1.15	mg/Kg	11/23/15	11/24/15	#61CJU-151123A-AZ24401

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 Sequence No.: 15 Autosampler Location: 48
 Sample ID: 151123A-3050-BLK Date Collected: 11/24/15 12:31:47 PM
 Analyst: RJS Data Type: Reprocessed on 11/25/15 9:10:52 AM
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt: 1 g
 Initial Sample Vol:
 Dilution: Sample Prep Vol: 100 mL

Mean Data: 151123A-3050-BLK

Analyte	Mean Corrected		Calib.	Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Conc.	Units		
Y 371.029	786200.5	99.07	%	4.768			4.81%
Y 371.029 Radial	722882.4	99.08	%	5.141			5.19%
Ag 338.289†	-6.5	-0.061	ug/L	0.2659	-0.006	mg/kg	0.0266 436.41%
Al 308.215†	3.4	5.425	ug/L	8.6089	0.543	mg/kg	0.8609 158.69%
As 188.979†	-1.6	-0.513	ug/L	0.4884	-0.051	mg/kg	0.0488 95.14%
B†	107.9	2.497	ug/L	0.2329	0.250	mg/kg	0.0233 9.33%
Ba 233.527†	8.7	0.068	ug/L	0.1618	0.007	mg/kg	0.0162 239.09%
Be 313.107†	8.1	0.037	ug/L	0.0087	0.004	mg/kg	0.0009 23.35%
Ca 315.887†	13.7	3.355	ug/L	2.3815	0.335	mg/kg	0.2382 70.99%
Cd 214.440†	4.1	0.021	ug/L	0.0935	0.002	mg/kg	0.0093 442.49%
Co 228.616†	0.4	0.008	ug/L	0.3433	0.001	mg/kg	0.0343 >999.9%
Cr 267.716†	3.7	0.044	ug/L	0.2191	0.004	mg/kg	0.0219 496.31%
Cu 327.393†	-20.1	-0.191	ug/L	0.3661	-0.019	mg/kg	0.0366 191.44%
Fe 273.955†	15.1	0.821	ug/L	0.9772	0.082	mg/kg	0.0977 119.03%
K 766.490†	-16.4	-6.302	ug/L	39.9193	-0.630	mg/kg	3.9919 633.42%
Mg 285.213†	39.9	5.081	ug/L	1.2900	0.508	mg/kg	0.1290 25.39%
Mn 257.610†	-3.6	-0.296	ug/L	0.6207	-0.030	mg/kg	0.0621 209.41%
Mo 202.031†	14.8	0.516	ug/L	0.2848	0.052	mg/kg	0.0285 55.19%
Na 589.592†	150.4	21.54	ug/L	22.642	2.154	mg/kg	2.2642 105.10%
Ni 231.604†	-2.0	-0.050	ug/L	0.1543	-0.005	mg/kg	0.0154 310.20%
P 213.617†	-2.1	-0.570	ug/L	0.9193	-0.057	mg/kg	0.0919 161.38%
Pb 220.353†	0.6	0.057	ug/L	0.4043	0.006	mg/kg	0.0404 705.19%
Sb 206.836†	5.7	1.344	ug/L	0.0839	0.134	mg/kg	0.0084 6.24%
Se 196.026†	2.9	0.907	ug/L	0.9675	0.091	mg/kg	0.0967 106.65%
Sn 189.927†	-7.7	-0.771	ug/L	0.3545	-0.077	mg/kg	0.0354 45.97%
Sr 421.552†	170.9	0.371	ug/L	0.1521	0.037	mg/kg	0.0152 41.01%
Ti 337.279†	9.2	0.346	ug/L	0.1856	0.035	mg/kg	0.0186 53.72%
Tl 190.801†	4.8	0.983	ug/L	0.3797	0.098	mg/kg	0.0380 38.62%
V 292.402†	79.0	0.483	ug/L	0.3400	0.048	mg/kg	0.0340 70.44%
Zn 206.200†	-16.2	-0.470	ug/L	1.1232	-0.047	mg/kg	0.1123 239.21%
Li 670.784	914.7	0.069	ug/L	0.0089	0.007	mg/kg	0.0009 12.77%

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level mg/Kg	SPK Result mg/Kg	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010C	ALUMINUM (AL)	200	187	93.5	80-120	11/23/15	11/24/15	#61CJU-151123A-AZ24401
EPA 6010C	BORON (B)	25.0	24.4	97.6	80-120	11/23/15	11/24/15	#61CJU-151123A-AZ24401
EPA 6010C	LITHIUM (LI)	10.00	11.0	110	80-120	11/23/15	11/24/15	#61CJU-151123A-AZ24401
EPA 6010C	ZINC (ZN)	50.0	52.8	106	80-120	11/23/15	11/24/15	#61CJU-151123A-AZ24401

Comments: _____

Sequence No.: 16
 Sample ID: 151123A-3050-LCS
 Analyst: RJS
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt: 1 g
 Dilution:

Autosampler Location: 49
 Date Collected: 11/24/15 12:36:01 PM
 Data Type: Reprocessed on 11/25/15 9:10:53 AM
 Initial Sample Vol:
 Sample Prep Vol: 100 mL

Mean Data: 151123A-3050-LCS

Analyte	Mean Corrected		Calib.	Std.Dev.	Sample		RSD
	Intensity	Conc. Units			Conc. Units	Std.Dev.	
Y 371.029	766236.9	96.55 %	1.007				1.04%
Y 371.029 Radial	701234.5	96.11 %	1.040				1.08%
Ag 338.289†	9637.9	90.14 ug/L	1.317	9.014 mg/kg	0.1317	1.46%	
Al 308.215†	1164.8	1871 ug/L	42.5	187.1 mg/kg	4.25	2.27%	
As 188.979†	705.8	232.9 ug/L	3.46	23.29 mg/kg	0.346	1.49%	
Bt	10563.3	244.4 ug/L	5.00	24.44 mg/kg	0.500	2.05%	
Ba 233.527†	30897.0	238.5 ug/L	3.44	23.85 mg/kg	0.344	1.44%	
Be 313.107†	10795.7	49.68 ug/L	0.839	4.968 mg/kg	0.0839	1.69%	
Ca 315.887†	112737.1	27660 ug/L	1343.5	2766 mg/kg	134.4	4.86%	
Cd 214.440†	9468.1	48.11 ug/L	0.514	4.811 mg/kg	0.0514	1.07%	
Co 228.616†	12953.7	243.4 ug/L	4.48	24.34 mg/kg	0.448	1.84%	
Cr 267.716†	20835.2	243.1 ug/L	4.08	24.31 mg/kg	0.408	1.68%	
Cu 327.393†	25763.7	244.3 ug/L	4.25	24.43 mg/kg	0.425	1.74%	
Fe 273.955†	16300.8	906.3 ug/L	17.01	90.63 mg/kg	1.701	1.88%	
K 766.490†	12012.9	4605 ug/L	278.4	460.5 mg/kg	27.84	6.04%	
Mg 285.213†	182362.6	23220 ug/L	1253.5	2322 mg/kg	125.4	5.40%	
Mn 257.610†	2944.3	238.5 ug/L	4.67	23.85 mg/kg	0.467	1.96%	
Mo 202.031†	6536.7	227.0 ug/L	3.07	22.70 mg/kg	0.307	1.35%	
Na 589.592†	166032.5	23800 ug/L	1295.1	2380 mg/kg	129.5	5.44%	
Ni 231.604†	9805.5	236.6 ug/L	2.75	23.66 mg/kg	0.275	1.16%	
P 213.617†	7358.9	1954 ug/L	22.4	195.4 mg/kg	2.24	1.15%	
Pb 220.353†	2563.9	243.4 ug/L	2.25	24.34 mg/kg	0.225	0.93%	
Sb 206.836†	986.2	231.5 ug/L	2.14	23.15 mg/kg	0.214	0.92%	
Se 196.026†	726.8	229.7 ug/L	2.70	22.97 mg/kg	0.270	1.17%	
Sn 189.927†	2271.6	229.3 ug/L	2.97	22.93 mg/kg	0.297	1.30%	
Sr 421.552†	111650.4	242.2 ug/L	13.10	24.22 mg/kg	1.310	5.41%	
Ti 337.279†	6034.1	226.4 ug/L	4.02	22.64 mg/kg	0.402	1.77%	
Tl 190.801†	1180.4	241.7 ug/L	3.48	24.17 mg/kg	0.348	1.44%	
V 292.402†	40906.4	250.9 ug/L	3.68	25.09 mg/kg	0.368	1.47%	
Zn 206.200†	18169.0	528.3 ug/L	8.89	52.83 mg/kg	0.889	1.68%	
Li 670.784	1449419.1	109.9 ug/L	0.88	10.99 mg/kg	0.088	0.80%	

Matrix Spike Recoveries

METALS

APPL ID: 151123S-24401 MS - 202562

APPL Inc.

908 North Temperance Avenue

Sample ID: AZ24401

Clovis, CA 93611

Client ID: S67-SS53-0006

Method	Compound Name	Spike Lvl	Matrix Res	SPK Res	DUP Res	SPK %	DUP %	RPD	RPD Recovery	Extract	Analysis	Extract	Analysis	QC	QC	
		mg/Kg	mg/Kg	mg/Kg	mg/Kg	Recovery	Recovery	Max	Limits	Date-Spk	Date-Spk	Date-Dup	Date-Dup	Group	Sample	
EPA 6010C ALUMINUM (AL)		388	8900	9880	12100	253 #	825 #	20.2 #	20	80-120	11/23/15	11/24/15	11/23/15	11/24/15	202562	AZ24401
EPA 6010C BORON (B)		48.5	21.3	59.5	65.5	78.8 #	91.1	9.6	20	80-120	11/23/15	11/24/15	11/23/15	11/24/15	202562	AZ24401
EPA 6010C LITHIUM (LI)		19.4	7.1	29.0	30.7	113	122 #	5.7	20	80-120	11/23/15	11/24/15	11/23/15	11/24/15	202562	AZ24401
EPA 6010C ZINC (ZN)		97.1	28.6	107	111	80.7	84.9	3.7	20	80-120	11/23/15	11/24/15	11/23/15	11/24/15	202562	AZ24401

= Recovery is outside QC limits.

Comments:

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Sequence No.: 44
Sample ID: AZ24401S01 MS
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 1.03 g
Dilution:

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Autosampler Location: 70
Date Collected: 11/24/15 2:44:02 PM
Data Type: Reprocessed on 11/25/15 9:11:33 AM
Initial Sample Vol:
Sample Prep Vol: 100 mL

Mean Data: AZ24401S01 MS

Analyte	Mean Corrected Intensity	Calib.	Sample		
	Conc. Units	Std.Dev.	Conc. Units	Std.Dev.	RSD
Y 371.029	790942.6	99.67 %	1.333		1.34%
Y 371.029 Radial	723392.5	99.15 %	1.511		1.52%
Ag 338.289†	17312.8	161.9 ug/L	0.66	15.72 mg/kg	0.064 0.41%
Al 308.215†	60488.9	97190 ug/L	1866.5	9436 mg/kg	181.2 1.92%
As 188.979†	1423.5	469.8 ug/L	6.39	45.61 mg/kg	0.621 1.36%
B†	26478.3	612.6 ug/L	3.52	59.48 mg/kg	0.342 0.57%
Ba 233.527†	87862.5	646.6 ug/L	2.81	62.78 mg/kg	0.273 0.43%
Be 313.107†	22293.4	102.6 ug/L	2.33	9.959 mg/kg	0.2259 2.27%
Ca 315.887†	222315.0	54530 ug/L	525.1	5294 mg/kg	51.0 0.96%
Cd 214.440†	19452.8	89.69 ug/L	1.294	8.708 mg/kg	0.1256 1.44%
Co 228.616†	26253.9	485.1 ug/L	6.02	47.09 mg/kg	0.585 1.24%
Cr 267.716†	64282.6	755.9 ug/L	3.76	73.39 mg/kg	0.365 0.50%
Cu 327.393†	51363.1	507.9 ug/L	2.46	49.31 mg/kg	0.239 0.48%
Fe 273.955†	3003160.6	171500 ug/L	1303.9	16660 mg/kg	126.6 0.76%
K 766.490†	93928.0	35980 ug/L	601.0	3493 mg/kg	58.4 1.67%
Mg 285.213†	472968.1	60430 ug/L	657.5	5867 mg/kg	63.8 1.09%
Mn 257.610†	12761.3	1047 ug/L	16.9	101.6 mg/kg	1.64 1.62%
Mo 202.031†	11893.0	422.4 ug/L	4.80	41.01 mg/kg	0.466 1.14%
Na 589.592†	313674.9	44060 ug/L	550.1	4278 mg/kg	53.4 1.25%
Ni 231.604†	19566.1	478.3 ug/L	6.41	46.44 mg/kg	0.622 1.34%
P 213.617†	22217.2	5898 ug/L	85.1	572.6 mg/kg	8.27 1.44%
Pb 220.353†	5644.1	546.1 ug/L	8.88	53.02 mg/kg	0.863 1.63%
Sb 206.836†	1790.4	420.3 ug/L	5.15	40.80 mg/kg	0.500 1.23%
Se 196.026†	1454.2	459.6 ug/L	5.46	44.62 mg/kg	0.530 1.19%
Sn 189.927†	4049.0	416.5 ug/L	6.64	40.43 mg/kg	0.645 1.59%
Sr 421.552†	240255.4	521.0 ug/L	6.45	50.58 mg/kg	0.626 1.24%
Ti 337.279†	38434.1	1442 ug/L	28.6	140.0 mg/kg	2.78 1.98%
Tl 190.801†	2133.8	436.9 ug/L	4.40	42.41 mg/kg	0.427 1.01%
V 292.402†	129112.6	749.9 ug/L	3.33	72.80 mg/kg	0.324 0.44%
Zn 206.200†	38510.4	1101 ug/L	6.2	106.9 mg/kg	0.60 0.57%
Li 670.784	3935774.6	298.5 ug/L	2.73	28.98 mg/kg	0.265 0.91%

=====
Sequence No.: 45
Sample ID: AZ24401S01 MSD
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 1.03 g
Dilution:

=====
Autosampler Location: 71
Date Collected: 11/24/15 2:48:27 PM
Data Type: Reprocessed on 11/25/15 9:11:34 AM
Initial Sample Vol:
Sample Prep Vol: 100 mL

Mean Data: AZ24401S01 MSD

Analyte	Mean Corrected	Intensity	Calib.	Sample	Std.Dev.	Std.Dev.	RSD
			Conc. Units	Conc. Units			
Y 371.029	789254.4	99.45 %	0.801				0.81%
Y 371.029 Radial	721186.1	98.85 %	0.912				0.92%
Ag 338.289†	17625.1	164.8 ug/L	0.27	16.00 mg/kg	0.026	0.16%	
Al 308.215†	68357.4	109800 ug/L	2119.5	10660 mg/kg	205.8	1.93%	
As 188.979†	1456.0	480.5 ug/L	5.69	46.65 mg/kg	0.552	1.18%	
B†	29167.7	674.9 ug/L	3.04	65.52 mg/kg	0.296	0.45%	
Ba 233.527†	91574.9	672.1 ug/L	2.44	65.26 mg/kg	0.237	0.36%	
Be 313.107†	23221.4	106.9 ug/L	2.28	10.37 mg/kg	0.221	2.13%	
Ca 315.887†	234330.3	57470 ug/L	659.6	5580 mg/kg	64.0	1.15%	
Cd 214.440†	20351.4	93.41 ug/L	0.665	9.069 mg/kg	0.0646	0.71%	
Co 228.616†	26979.7	497.3 ug/L	3.69	48.28 mg/kg	0.358	0.74%	
Cr 267.716†	69273.1	814.7 ug/L	2.84	79.10 mg/kg	0.275	0.35%	
Cu 327.393†	52980.8	525.3 ug/L	1.74	51.00 mg/kg	0.169	0.33%	
Fe 273.955†	3299043.1	188500 ug/L	1017.4	18300 mg/kg	98.8	0.54%	
K 766.490†	109156.3	41810 ug/L	771.0	4060 mg/kg	74.9	1.84%	
Mg 285.213†	512836.4	65530 ug/L	786.3	6362 mg/kg	76.3	1.20%	
Mn 257.610†	13509.8	1109 ug/L	24.2	107.6 mg/kg	2.35	2.18%	
Mo 202.031†	12222.5	434.7 ug/L	2.84	42.20 mg/kg	0.276	0.65%	
Na 589.592†	328264.4	46070 ug/L	650.1	4473 mg/kg	63.1	1.41%	
Ni 231.604†	20128.7	492.1 ug/L	3.43	47.78 mg/kg	0.333	0.70%	
P 213.617†	23343.4	6197 ug/L	52.5	601.7 mg/kg	5.10	0.85%	
Pb 220.353†	5810.6	563.4 ug/L	3.01	54.70 mg/kg	0.292	0.53%	
Sb 206.836†	1851.7	434.7 ug/L	3.71	42.20 mg/kg	0.360	0.85%	
Se 196.026†	1493.1	471.9 ug/L	2.08	45.81 mg/kg	0.202	0.44%	
Sn 189.927†	4142.8	428.1 ug/L	2.84	41.56 mg/kg	0.275	0.66%	
Sr 421.552†	254421.1	551.7 ug/L	7.16	53.57 mg/kg	0.695	1.30%	
Ti 337.279†	47396.0	1779 ug/L	36.4	172.7 mg/kg	3.53	2.04%	
Tl 190.801†	2186.5	447.6 ug/L	1.47	43.46 mg/kg	0.143	0.33%	
V 292.402†	137248.6	795.5 ug/L	1.29	77.23 mg/kg	0.125	0.16%	
Zn 206.200†	40111.3	1146 ug/L	6.4	111.3 mg/kg	0.62	0.56%	
Li 670.784	4173772.2	316.5 ug/L	2.17	30.73 mg/kg	0.210	0.68%	

=====
Sequence No.: 26
Sample ID: AZ24401S01 MS-1/20
Analyst: RJS
Logged In Analyst (Original) : chemist_metals
Initial Sample Wt: 1.03 g
Dilution: 20X

=====
Autosampler Location: 56
Date Collected: 11/24/15 1:20:49 PM
Data Type: Reprocessed on 11/25/15 9:11:07 AM
Initial Sample Vol:
Sample Prep Vol: 100 mL

Mean Data: AZ24401S01 MS-1/20

Analyte	Mean Corrected		Calib.	Sample			RSD
	Intensity	Conc. Units		Std.Dev.	Conc. Units	Std.Dev.	
Y 371.029	804468.3	101.4 %	0.37				0.37%
Y 371.029 Radial	740214.6	101.5 %	0.39				0.39%
Ag 338.289†	954.0	8.922 ug/L	0.2367	17.32 mg/kg	0.460	2.65%	
Al 308.215†	3166.5	5088 ug/L	4.8	9879 mg/kg	9.3	0.09%	
As 188.979†	74.6	24.61 ug/L	0.471	47.80 mg/kg	0.915	1.91%	
B†	1487.2	34.41 ug/L	0.319	66.82 mg/kg	0.619	0.93%	
Ba 233.527†	4958.5	36.45 ug/L	0.192	70.78 mg/kg	0.374	0.53%	
Be 313.107†	1122.7	5.166 ug/L	0.0197	10.03 mg/kg	0.038	0.38%	
Ca 315.887†	11930.3	2926 ug/L	16.7	5682 mg/kg	32.5	0.57%	
Cd 214.440†	1076.1	4.931 ug/L	0.1019	9.574 mg/kg	0.1978	2.07%	
Co 228.616†	1446.2	26.72 ug/L	0.244	51.88 mg/kg	0.473	0.91%	
Cr 267.716†	3675.9	43.24 ug/L	0.253	83.96 mg/kg	0.492	0.59%	
Cu 327.393†	2674.1	26.57 ug/L	0.615	51.60 mg/kg	1.195	2.31%	
Fe 273.955†	173323.8	9901 ug/L	13.7	19230 mg/kg	26.7	0.14%	
K 766.490†	4567.4	1749 ug/L	129.3	3395 mg/kg	251.1	7.40%	
Mg 285.213†	25066.7	3204 ug/L	59.3	6221 mg/kg	115.1	1.85%	
Mn 257.610†	674.4	55.38 ug/L	0.045	107.5 mg/kg	0.09	0.08%	
Mo 202.031†	633.1	22.54 ug/L	0.330	43.76 mg/kg	0.641	1.47%	
Na 589.592†	16545.4	2320 ug/L	47.8	4505 mg/kg	92.9	2.06%	
Ni 231.604†	1111.0	27.19 ug/L	0.292	52.80 mg/kg	0.567	1.07%	
P 213.617†	1148.4	304.9 ug/L	0.43	592.0 mg/kg	0.83	0.14%	
Pb 220.353†	308.3	29.77 ug/L	1.111	57.80 mg/kg	2.157	3.73%	
Sb 206.836†	95.6	22.44 ug/L	0.525	43.58 mg/kg	1.020	2.34%	
Se 196.026†	80.3	25.38 ug/L	1.643	49.29 mg/kg	3.191	6.47%	
Sn 189.927†	211.5	21.76 ug/L	0.239	42.25 mg/kg	0.464	1.10%	
Sr 421.552†	12480.2	27.06 ug/L	0.365	52.55 mg/kg	0.708	1.35%	
Ti 337.279†	1970.1	73.93 ug/L	0.223	143.6 mg/kg	0.43	0.30%	
Tl 190.801†	116.7	23.89 ug/L	0.541	46.39 mg/kg	1.051	2.27%	
V 292.402†	6885.0	39.84 ug/L	0.580	77.37 mg/kg	1.126	1.46%	
Zn 206.200†	2212.7	63.32 ug/L	0.314	123.0 mg/kg	0.61	0.50%	
Li 670.784	173679.4	13.17 ug/L	0.083	25.58 mg/kg	0.161	0.63%	

Sequence No.: 27
 Sample ID: AZ24401S01 MSD-1/20
 Analyst: RJS
 Logged In Analyst (Original) : chemist_metals
 Initial Sample Wt: 1.03 g
 Dilution: 20X

Autosampler Location: 57
 Date Collected: 11/24/15 1:25:02 PM
 Data Type: Reprocessed on 11/25/15 9:11:08 AM
 Initial Sample Vol:
 Sample Prep Vol: 100 mL

Mean Data: AZ24401S01 MSD-1/20

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Y 371.029	802617.7	101.1 %	0.70			0.69%
Y 371.029 Radial	737973.6	101.1 %	0.72			0.72%
Ag 338.289†	993.9	9.295 ug/L	0.7991	18.05 mg/kg	1.552	8.60%
Al 308.215†	3885.8	6243 ug/L	45.2	12120 mg/kg	87.7	0.72%
As 188.979†	76.5	25.24 ug/L	1.428	49.01 mg/kg	2.772	5.66%
Bt	1654.6	38.28 ug/L	1.478	74.34 mg/kg	2.869	3.86%
Ba 233.527†	5209.8	38.12 ug/L	1.552	74.02 mg/kg	3.013	4.07%
Be 313.107†	1261.6	5.805 ug/L	0.0541	11.27 mg/kg	0.105	0.93%
Ca 315.887†	13188.0	3234 ug/L	57.5	6280 mg/kg	111.7	1.78%
Cd 214.440†	1129.7	5.131 ug/L	0.1943	9.962 mg/kg	0.3772	3.79%
Co 228.616†	1515.8	27.91 ug/L	1.229	54.20 mg/kg	2.387	4.40%
Cr 267.716†	4003.7	47.10 ug/L	2.162	91.46 mg/kg	4.199	4.59%
Cu 327.393†	2833.8	28.26 ug/L	2.044	54.87 mg/kg	3.969	7.23%
Fe 273.955†	198805.3	11360 ug/L	585.5	22050 mg/kg	1136.8	5.16%
K 766.490†	5972.5	2287 ug/L	116.5	4442 mg/kg	226.2	5.09%
Mg 285.213†	29740.6	3801 ug/L	78.6	7380 mg/kg	152.6	2.07%
Mn 257.610†	775.5	63.67 ug/L	0.678	123.6 mg/kg	1.32	1.07%
Mo 202.031†	656.4	23.42 ug/L	0.796	45.47 mg/kg	1.546	3.40%
Na 589.592†	18828.9	2640 ug/L	51.6	5125 mg/kg	100.1	1.95%
Ni 231.604†	1141.7	27.95 ug/L	0.910	54.27 mg/kg	1.767	3.26%
P 213.617†	1223.1	324.7 ug/L	15.12	630.5 mg/kg	29.36	4.66%
Pb 220.353†	340.1	32.93 ug/L	1.993	63.93 mg/kg	3.871	6.05%
Sb 206.836†	95.6	22.45 ug/L	1.463	43.59 mg/kg	2.841	6.52%
Se 196.026†	78.1	24.69 ug/L	1.035	47.93 mg/kg	2.009	4.19%
Sn 189.927†	219.2	22.70 ug/L	0.974	44.08 mg/kg	1.891	4.29%
Sr 421.552†	14468.7	31.38 ug/L	0.581	60.92 mg/kg	1.128	1.85%
Ti 337.279†	2641.5	99.14 ug/L	0.809	192.5 mg/kg	1.57	0.82%
Tl 190.801†	122.6	25.10 ug/L	1.393	48.73 mg/kg	2.704	5.55%
V 292.402†	7594.0	43.82 ug/L	2.448	85.08 mg/kg	4.754	5.59%
Zn 206.200†	2337.4	66.77 ug/L	2.699	129.7 mg/kg	5.24	4.04%
Li 670.784	190122.2	14.42 ug/L	0.766	28.00 mg/kg	1.488	5.31%

1%HNO3 / 5%HCl BLK				6010B/6010C ICSA			
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER
100 mL	HCl	BDH	4115022	11/24/15	1mL	Al	CPI
20 mL	HNO3	EMD	55043	11/24/15	1mL	Ca	CPI
Prepared in 2000 mL DI Water					1mL	Mg	CPI
STD 1 / LDL 6010B/6010C					1mL	Fe	O2SI
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	Prepared in 50 mL 1%HNO3/5%HCl		
0.5 mL	6010 LDL	O2SI	1078402-35590	09/01/16	6010B/6010C ICSAB		
Prepared in 50 mL 1%HNO3/5%HCl					1mL	Al	CPI
STD 3 / HDL 6010B/6010C					1mL	Ca	CPI
1ML	CCV-A	Environmental Express	1428118-34178	10/14/15	1mL	Mg	CPI
1ML	CCV-B	Environmental Express	1428119-34179	10/14/15	1mL	Fe	O2SI
1ML	CCV-C	Environmental Express	1428120-34180	10/14/15	0.5mL	INT SPECIAL MIX	O2SI
Prepared in 100 mL 1%HNO3 / 5%HCl					Prepared in 50 mL 1%HNO3/5%HCl		
STD 2 / CCV1 6010B/6010C/6010C					6010B/6010C ICV		
AMOUNT	STD	PREP DATE	EXP DATE		0.5ML	QCS ICV A	CPI
25mL	STD 3	TODAY	1 week		0.5ML	QCS ICV B	CPI
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 50mL 1%HNO3/5%HCl		
CCV2 6010B/6010C					6010B/6010C Internal Standard		
AMOUNT	STD	PREP DATE	EXP DATE		AMOUNT	STD	MANUFACTURER
15mL	STD 3	TODAY	1 week		2mL	Yttrium	O2SI
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 2L 1%HNO3 / 5%HCl		

1%HNO3 / 5%HCl BLK				6010B/6010C ICSA					
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
100 mL	HCL	BDH	4115022	11/25/15	1mL	Al	CPI	14D237-33868	01/15/16
20 mL	HNO3	EMD	55043	11/25/15	1mL	Ca	CPI	14D176-33867	01/15/16
Prepared in 2000 mL DI Water					1mL	Mg	CPI	14F190-33865	01/15/16
STD 1 / LDL 6010B/6010C					1mL	Fe	O2SI	1062942-33880	01/12/16
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	Prepared in 50 mL 1%HNO3/5%HCl				
0.5 mL	6010 LDL	O2SI	1078402-35590	09/01/16	6010B/6010C ICSAB				
Prepared in 50 mL 1%HNO3/5%HCl					1mL	Al	CPI	14D237-33868	01/15/16
STD 3 / HDL 6010B/6010C					1mL	Ca	CPI	14D176-33867	01/15/16
1ML	CCV-A	Environmental Express	1428118-34178	10/14/15	1mL	Mg	CPI	14F190-33865	01/15/16
1ML	CCV-B	Environmental Express	1428119-34179	10/14/15	1mL	Fe	O2SI	1062942-33880	01/12/16
1ML	CCV-C	Environmental Express	1428120-34180	10/14/15	0.5mL	INT SPECIAL MIX	O2SI	1070553-34624	03/01/16
Prepared in 100 mL 1%HNO3 / 5%HCl					Prepared in 50 mL 1%HNO3/5%HCl				
STD 2 / CCV1 6010B/6010C/6010C					6010B/6010C ICV				
AMOUNT	STD	PREP DATE	EXP DATE		0.5ML	QCS ICV A	CPI	15C180-34943	09/19/16
25mL	STD 3	TODAY	1 week		0.5ML	QCS ICV B	CPI	15C181-34944	09/19/16
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 50mL 1%HNO3/5%HCl				
CCV2 6010B/6010C					6010B/6010C Internal Standard				
AMOUNT	STD	PREP DATE	EXP DATE		AMOUNT	STD	MANUFACTURER		
15mL	STD 3	TODAY	1 week		2mL	Yttrium	O2SI	1073310-35027	10/01/16
25mL	1%HNO3/5%HCl	TODAY	1 week		Prepared in 2L 1%HNO3 / 5%HCl				

Metals Digestion Worksheet

Method Name 3050B Digestion

Prep Method M3050alt

Set 15123A

Units mL

Spikes	
Spiked ID 1	LCSW LOT# 1080490-35747
Spiked ID 2	LCSW LOT# 1080321-35748
Spiked ID 3	Li 10mg/L Prep 11-23-15
Spiked ID 4	
Spiked By	NM Date: 11/23/15 9:50:00 AM
Witnessed By	RJS Date: 11/23/15 9:50:00 AM

Starting Temp:	96c Slot 21
Ending Temp:	95c Slot 21
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	Yes
End Date/Time	11/23/15 12:20

Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1|151123A Blk				1.00g	100mL	11/23/15 9:50	equip: Modblock4
2|151123A LCS		1mL	1+2+3	1.00g	100mL	11/23/15 9:50	equip: Modblock4
3|AZ24396	AZ24396S01			1.02g	100mL	11/23/15 9:50	equip: Modblock4
4|AZ24397	AZ24397S01			1.05g	100mL	11/23/15 9:50	equip: Modblock4
5|AZ24398	AZ24398S01			0.98g	100mL	11/23/15 9:50	equip: Modblock4
6|AZ24399	AZ24399S01			0.97g	100mL	11/23/15 9:50	equip: Modblock4
7|AZ24400	AZ24400S01			1.06g	100mL	11/23/15 9:50	equip: Modblock4
8|AZ24401	AZ24401S01			1.03g	100mL	11/23/15 9:50	equip: Modblock4
9|AZ24401 MS	AZ24401S01	2mL	1+2+3	1.03g	100mL	11/23/15 9:50	equip: Modblock4
10|AZ24401 MSD	AZ24401S01	2mL	1+2+3	1.03g	100mL	11/23/15 9:50	equip: Modblock4
11|AZ24856	AZ24856M01			0.98g	100mL	11/23/15 9:50	equip: Modblock4
12|AZ24858	AZ24858M01			0.97g	100mL	11/23/15 9:50	equip: Modblock4
13|AZ25037	AZ25037M02			0.96g	100mL	11/23/15 9:50	equip: Modblock4
14|AZ25077	AZ25077S03			1.01g	100mL	11/23/15 9:50	equip: Modblock4

Solvent and Lot#	
1:1 HNO3 NA	
HNO3 MERCK 55195 4729	
H2O2 EMD na	
HCL BDH 4115050 5130	

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	PBS
Date	11/29/15
Time	1000
Moved to	MEAS

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	11/23/15 4:37:29 PM

Reviewed By: *PBS*Date: *11/24/15*

6010 Injection Log

Directory: K:\ICAP PHOEBE\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	24 Nov 2015	11:19	CalBlk 151124RJS I:PB O:R		151125A6010	1.
2	24 Nov 2015	11:23	STD 1 151124RJS I:PB O:RJ		151125A6010	1.
3	24 Nov 2015	11:27	STD 2 151124RJS I:PB O:RJ		151125A6010	1.
4	24 Nov 2015	11:31	STD 3 151124RJS I:PB O:RJ		151125A6010	1.
5	24 Nov 2015	11:34	ICV 151124RJS I:PB O:RJS		151125A6010	1.
6	24 Nov 2015	11:41	ICB 151124RJS I:PB O:RJS		151125A6010	1.
8	24 Nov 2015	11:55	ICSA 151124RJS I:PB O:RJS		151125A6010	1.
9	24 Nov 2015	12:00	ICSAB 151124RJS I:PB O:RJ		151125A6010	1.
10	24 Nov 2015	12:04	CCV1 151124RJS I:PB O:RJS		151125A6010	1.
11	24 Nov 2015	12:11	CCB 151124RJS I:PB O:RJS		151125A6010	1.
15	24 Nov 2015	12:31	151123A-3050-BLK		151125A6010	1.
16	24 Nov 2015	12:36	151123A-3050-LCS		151125A6010	1.
20	24 Nov 2015	12:55	AZ24396S01-1/20		151125A6010	20.
21	24 Nov 2015	12:59	AZ24397S01-1/20		151125A6010	20.
23	24 Nov 2015	13:08	AZ24399S01-1/20		151125A6010	20.
24	24 Nov 2015	13:12	AZ24400S01-1/20		151125A6010	20.
25	24 Nov 2015	13:16	AZ24401S01-1/20		151125A6010	20.
26	24 Nov 2015	13:20	AZ24401S01 MS-1/20		151125A6010	20.
27	24 Nov 2015	13:25	AZ24401S01 MSD-1/20		151125A6010	20.
29	24 Nov 2015	13:33	AZ24401S01-1/100		151125A6010	100.
30	24 Nov 2015	13:38	CCV2 151124RJS I:PB O:RJS		151125A6010	1.
31	24 Nov 2015	13:41	CCB 151124RJS I:PB O:RJS		151125A6010	1.
36	24 Nov 2015	14:05	CCV1 151124RJS I:PB O:RJS		151125A6010	1.
37	24 Nov 2015	14:12	CCB 151124RJS I:PB O:RJS		151125A6010	1.
38	24 Nov 2015	14:18	AZ24396S01		151125A6010	1.
39	24 Nov 2015	14:22	AZ24397S01		151125A6010	1.
40	24 Nov 2015	14:26	AZ24398S01		151125A6010	1.
41	24 Nov 2015	14:31	AZ24399S01		151125A6010	1.
42	24 Nov 2015	14:35	AZ24400S01		151125A6010	1.
43	24 Nov 2015	14:39	AZ24401S01		151125A6010	1.
44	24 Nov 2015	14:44	AZ24401S01 MS		151125A6010	1.
45	24 Nov 2015	14:48	AZ24401S01 MSD		151125A6010	1.
48	24 Nov 2015	15:04	CCV2 151124RJS I:PB O:RJS		151125A6010	1.
49	24 Nov 2015	15:14	CCB 151124RJS I:PB O:RJS		151125A6010	1.

6010 Injection Log

Directory: K:\ICAP PHOEBE\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
100	25 Nov 2015	12:44	CalBlk 151125RJS I:PB O:R		151125A6010	1.
101	25 Nov 2015	12:48	STD 1 151125RJS I:PB O:RJ		151125A6010	1.
102	25 Nov 2015	12:53	STD 2 151125RJS I:PB O:RJ		151125A6010	1.
103	25 Nov 2015	12:56	STD 3 151125RJS I:PB O:RJ		151125A6010	1.
104	25 Nov 2015	13:00	ICV 151125RJS I:PB O:RJS		151125A6010	1.
105	25 Nov 2015	13:13	ICB 151125RJS I:PB O:RJS		151125A6010	1.
107	25 Nov 2015	13:30	ICSA 151125RJS I:PB O:RJS		151125A6010	1.
108	25 Nov 2015	13:35	ICSAB 151125RJS I:PB O:RJ		151125A6010	1.
110	25 Nov 2015	14:09	CCV1 151125RJS I:PB O:RJS		151125A6010	1.
111	25 Nov 2015	14:13	CCB 151125RJS I:PB O:RJS		151125A6010	1.
119	25 Nov 2015	14:51	CCV2 151125RJS I:PB O:RJS		151125A6010	1.
120	25 Nov 2015	14:55	CCB 151125RJS I:PB O:RJS		151125A6010	1.
121	25 Nov 2015	14:59	AZ24401S01-A		151125A6010	1.
122	25 Nov 2015	15:03	CCV1 151125RJS I:PB O:RJS		151125A6010	1.
123	25 Nov 2015	15:07	CCB 151125RJS I:PB O:RJS		151125A6010	1.

Wetlab Results

ARF: 77838

APPL Inc.

908 North Temperance Avenue
Clovis, CA 93611

Tetra Tech

5700 Lake Wright Dr, Ste 309
Norfolk, VA 23502

Attn: Ed Corack

Method	Analyte	Result	RL	MDL	Units	Prep Date	Analysis Date
APPL ID: AZ24396	-Client Sample ID: S67-SS50-0006			-Sample Collection Date: 11/09/15	Project: CTO JU11 112G02622 N		
CLP MOIST	MOISTURE	15.9	2.0		%	11/23/15	11/24/15
APPL ID: AZ24397	-Client Sample ID: S67-SS50-0006P			-Sample Collection Date: 11/09/15	Project: CTO JU11 112G02622 N		
CLP MOIST	MOISTURE	15.3	2.0		%	11/23/15	11/24/15
APPL ID: AZ24398	-Client Sample ID: S67-SB50-1618			-Sample Collection Date: 11/09/15	Project: CTO JU11 112G02622 N		
CLP MOIST	MOISTURE	21.2	2.0		%	11/23/15	11/24/15
APPL ID: AZ24399	-Client Sample ID: S67-SS51-0006			-Sample Collection Date: 11/09/15	Project: CTO JU11 112G02622 N		
CLP MOIST	MOISTURE	23.6	2.0		%	11/23/15	11/24/15
APPL ID: AZ24400	-Client Sample ID: S67-SS52-0006			-Sample Collection Date: 11/10/15	Project: CTO JU11 112G02622 N		
CLP MOIST	MOISTURE	19.0	2.0		%	11/23/15	11/24/15
APPL ID: AZ24401	-Client Sample ID: S67-SS53-0006			-Sample Collection Date: 11/10/15	Project: CTO JU11 112G02622 N		
CLP MOIST	MOISTURE	18.6	2.0		%	11/23/15	11/24/15

Printed: 11/25/15 11:30:31 AM

WETLAB

Sample/Sample Duplicate Results

Tetra Tech
 5700 Lake Wright Dr, Ste 309
 Norfolk, VA 23502

APPL Inc.
 908 North Temperance Avenue
 Clovis, CA 93611

Attn: Ed Corack

Sample ID: AZ24401

Client ID: S67-SS53-0006

Project: CTO JU11 112G02622 NSF Indian Head

ARF: 77838

Method	Analyte	Sample ID	Sample	Sample Dup	RPD	Max	MDL	PQL	Sample	Sample	Sample Dup	Sample Dup	
			Result	Result					Extract Date	Analysis Date	Extract Date	Analysis Date	
CLP MOIST	MOISTURE	AZ24401	18.6	18.4	1.1	20		2.0	%	11/23/15	11/24/15	11/23/15	11/24/15

Printed: 11/25/15 11:30:28 AM

Dup-SCII (NoMC)

% Moisture

Batch: QCG 151123-M005791

Date: 11/23/15 11:40

Method: CLP 4.0

Sample	Container	Pan (g)	Pan+Wet (g)	Pan+Dry 1 (g)	Pan+Dry 2 (g)	Moisture (%)	Comments
AZ24471		0.8333	8.5079	7.1619	7.1621	17.536	
		11/23/15 11:40	11/23/15 11:55		11/24/15 07:31		
AZ24470		0.8355	9.0905	7.6987	7.6987	16.860	
		11/23/15 11:40	11/23/15 11:55	11/24/15 07:31	11/24/15 07:31		
AZ24469		0.8120	7.8757	6.2827	6.2829	22.549	
		11/23/15 11:39	11/23/15 11:53		11/24/15 07:30		
AZ24468		0.8356	7.4142	6.9659	6.9659	6.815	
		11/23/15 11:39	11/23/15 11:52	11/24/15 07:30	11/24/15 07:30		
AZ24401D		0.8177	8.1380	6.7922	6.7923	18.383	AZ24401S03
		11/23/15 11:38	11/23/15 11:50	11/24/15 07:30	11/24/15 07:30		
AZ24401		0.8427	8.2978	6.9092	6.9093	18.625	AZ24401S03
		11/23/15 11:38	11/23/15 11:49	11/24/15 07:29	11/24/15 07:29		
AZ24400		0.8375	8.7395	7.2354	7.2355	19.033	AZ24400S02
		11/23/15 11:37	11/23/15 11:48	11/24/15 07:29	11/24/15 07:29		
AZ24399		0.8235	8.1356	6.4131	6.4131	23.557	AZ24399S02
		11/23/15 11:37	11/23/15 11:46	11/24/15 07:29			
AZ24398		0.8184	7.9897	6.4727	6.4725	21.157	AZ24398S02
		11/23/15 11:36	11/23/15 11:45	11/24/15 07:28			
AZ24397		0.8411	9.7920	8.4244	8.4245	15.278	AZ24397S01
		11/23/15 11:36	11/23/15 11:43	11/24/15 07:28	11/24/15 07:28		
AZ24396		0.8198	8.2907	7.1027	7.1028	15.900	AZ24396S02
		11/23/15 11:35	11/23/15 11:42	11/24/15 07:28	11/24/15 07:28		

Date/Time InOven@104°C	Date/Time OutOven@104°C	Date/Time InOven@104°C	Date/Time OutOven@104°C
11/23/15 11:40:00 AM			11/24/15 7:31:00 AM

Inorganic Balance Calibration Verification Logbook #23

Date	Initials	Balance	Weight	Reading	Lower Limit	Upper Limit	Comments / Is the Bubble Centered?
11/20/15	PD	Mettler AT200	0.5g	0.4998 g	0.4995	0.5005	✓
		Mettler AT200	1g	0.9999 g	0.9990	1.0010	
		Mettler AT200	20g	20.0004 g	19.9800	20.0200	
		Mettler AT200	50g	50.0001 g	49.9500	50.0500	
		Mettler AT200	100g	100.0002 g	99.9000	100.1000	
		Mettler AT200	150g	150.0006 g	149.8500	150.1500	
		OHAUS ARC120	0.1g	0.10 g	0.08	0.12	
		OHAUS ARC120	0.5g	0.50 g	0.48	0.52	
		OHAUS ARC120	1g	0.99 g	0.98	1.02	
		OHAUS ARC120	100g	99.96 g	98.00	102.00	
		OHAUS ARC120	1kg	999.66 g	980.00	1020.00	✓
		OHAUS ARC120	2kg	1999.38 g	1960.00	2040.00	
11/23/15	PD	Mettler AT200	0.5g	0.4995 g	0.4995	0.5005	✓
		Mettler AT200	1g	0.9999 g	0.9990	1.0010	
		Mettler AT200	20g	20.0003 g	19.9800	20.0200	
		Mettler AT200	50g	50.0002 g	49.9500	50.0500	
		Mettler AT200	100g	100.0005 g	99.9000	100.1000	
		Mettler AT200	150g	150.0003 g	149.8500	150.1500	
		OHAUS ARC120	0.1g	0.10 g	0.08	0.12	
		OHAUS ARC120	0.5g	0.50 g	0.48	0.52	
		OHAUS ARC120	1g	1.00 g	0.98	1.02	
		OHAUS ARC120	100g	99.97 g	98.00	102.00	
		OHAUS ARC120	1kg	999.67 g	980.00	1020.00	
		OHAUS ARC120	2kg	1999.40 g	1960.00	2040.00	✓
11/24/15	PD	Mettler AT200	0.5g	0.5002 g	0.4995	0.5005	✓
		Mettler AT200	1g	1.0001 g	0.9990	1.0010	
		Mettler AT200	20g	20.0000 g	19.9800	20.0200	
		Mettler AT200	50g	50.0001 g	49.9500	50.0500	
		Mettler AT200	100g	100.0004 g	99.9000	100.1000	
		Mettler AT200	150g	150.0007 g	149.8500	150.1500	
		OHAUS ARC120	0.1g	0.11 g	0.08	0.12	
		OHAUS ARC120	0.5g	0.50 g	0.48	0.52	
		OHAUS ARC120	1g	1.00 g	0.98	1.02	
		OHAUS ARC120	100g	99.97 g	98.00	102.00	
		OHAUS ARC120	1kg	999.70 g	980.00	1020.00	
		OHAUS ARC120	2kg	1999.47 g	1960.00	2040.00	✓
11/25/15	PD	Mettler AT200	0.5g	0.4999 g	0.4995	0.5005	✓
		Mettler AT200	1g	0.9993 g	0.9990	1.0010	
		Mettler AT200	20g	19.9993 g	19.9800	20.0200	
		Mettler AT200	50g	49.9998 g	49.9500	50.0500	
		Mettler AT200	100g	100.0001 g	99.9000	100.1000	
		Mettler AT200	150g	149.9999 g	149.8500	150.1500	
		OHAUS ARC120	0.1g	0.10 g	0.08	0.12	
		OHAUS ARC120	0.5g	0.49 g	0.48	0.52	
		OHAUS ARC120	1g	1.00 g	0.98	1.02	
		OHAUS ARC120	100g	99.97 g	98.00	102.00	
		OHAUS ARC120	1kg	999.70 g	980.00	1020.00	
		OHAUS ARC120	2kg	1999.48 g	1960.00	2040.00	✓